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EDITED BY THE HONORARY SECRETARY,  
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\* \* \* *The Institute’s object being to investigate, it must not be held to endorse the various views expressed at its meetings.*

## ORDINARY MEETING.\*

THE VEN. ARCHDEACON THORNTON, D.D., V.P., IN THE  
CHAIR.

The Minutes of the last Meeting were read and confirmed, and the following Elections were announced :—

MEMBERS :—The Ven. Archdeacon Donne, M.A., Yorks ; J. P. McArthur, Esq., D.L., Surrey ; A. G. McArthur, Esq., London ; F. A. Holman, Esq., London.

ASSOCIATES :—Colonel Le Mesurier, London ; Rev. J. E. C. Welldon, M.A., Harrow ; C. King Rudge, Esq., M.R.C.S., Bristol.

HON. COR. MEMBER :—Surg.-Major W. T. Black, Esq., M.D., Edinburgh.

The following paper was then read by the Author :—

*THE ALLEGED SCEPTICISM OF KANT.* By W. L.  
COURTNEY, M.A., LL.D.

**K**ANT, says a French critic, has spread through the whole of Europe the spirit of doubt. This is the point from which I desire to begin, for, if such a statement as this be true, then it is also true that the thinker who, before all others, represents a definite turning-point, an epoch-making system in modern philosophy, is the chief agent for that entirely negative spirit which Professor Huxley has induced us to call agnosticism. My subject, therefore, though primarily dealing with Kant, is not by any means limited to him. I assume that he has made a revolution in the mental world, similar to that which was made in the astronomical world by the demolition of the old Ptolemaic methods, and the substitution of the Copernican system. I also assume that, in one way or other, a characteristic of the modern age is an attitude of suspense—not wholly of negation, but of suspense—towards the ultimate principles of the constitution of man's nature and the government of the world ; and the question which I wish to consider is how far it is due to the Kantian standpoint that the world has become sceptical, and that we

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\* 6th of 28th Session.

have tacitly agreed to drop out of consideration principles and laws which do not concern the ordinary relation of phenomena to one another.

One of my assumptions I do not think that it is necessary to justify; it is that which deals with the salient characteristic of modern thought, that it shrinks from arriving at a definite, a positive, a dogmatic conclusion, with regard to those principles which, in an older age, we used to call the ultimate verities of the world. Possibly, however, it may be necessary to say in what sense the system of Kant represents a turning-point in speculation. In order to elucidate this point, I will ask you to consider that the course of modern philosophy has in one respect run parallel with the course which was taken by the earlier philosophy of Greece. You will find, I think, that of the two main questions which human beings ask of themselves, "What am I?" and "What is the world in which I live?" the second takes precedence of the first, and that, after a certain period of more or less hypothetical speculation, the discovery is made that the second cannot be answered at all, unless we have come to some conclusion about the first. Observe, for instance, what happened in the infancy of speculation in Greece. There were a series of physical philosophers who desired to arrive at definite statements with regard to the constitution of the world in which they found themselves. Is there one primitive principle, is there one underlying element, which can explain the kosmos of things? One answer is, water; another is air; a third is fire; a fourth is all the four elements taken together. And then, when philosophy has succeeded in producing a multiplicity of inconsistent and contradictory answers, there comes a man like Socrates, who bluntly declares that all his predecessors had begun at the wrong end in the attempted solution of their problems. There is no chance of discovering the nature and constitution of the world, unless certain preliminary questions are answered:—What am I, who pretend to understand the world? How can I be sure that I can know anything? How can I be certain that my so-called processes of knowledge can be trusted? What, in point of fact, am I, who desire the solution of such terrestrial and celestial problems? And then philosophy makes a pause, because a new point of view is put before it, and for a long time its special subject is the enquiry into the conditions of knowledge, and the chief study of the thinker becomes, not physics, but logic, ethics, and psychology.

And now observe that exactly the same thing is reproduced in what we call modern philosophy. Starting from Bacon onwards, we have a series of systems which, in whatever fashion, attempt to decide what matter is, what are the qualities of matter; a great series of natural and physical philosophers, who, sometimes dogmatically, and sometimes sceptically, resolve the insistent questions always pressing upon the human spirit. And then come men like Berkeley and Hume in England, and Kant in Germany, who propose a different question. The English philosophers, in their way, started the same kind of speculation which the philosopher of Königsberg attempted to answer, but neither Hume nor Berkeley realised the importance of the standpoint they were inaugurating, nor did they see quite clearly the nature of the problem whose solution they desired. It was Kant who first laid it down in his "Prolegomena to any Future Metaphysic," that what we must first determine is the conditions and limitations under which knowledge is possible at all. And this is why his own analogy with the work of the reformer of astronomy is absolutely correct. In earlier times the assumption was that the earth lay at rest in the centre of the universe, and that the sun and the stars were the satellites, the appanages, of the abode of man. Suddenly the point of view is changed; the earth is not at rest, but is revolving round the central sun. If we desire to get to the centre of our universe, we shall find it in that object in relation to which every satellite is at once attracted and repelled, held in its elliptical course by centripetal and centrifugal forces. A similar revolution occurs in philosophy. We change the point of view. Instead of attempting to determine the characteristics of the kosmos, we start with the conditions of our own human knowledge. We erect, as it were, our observatories not in the world, but within ourselves—under the assurance that it is human thought which is the measure of the universe, not the universe which is the explanation and parent of thought. Such, at least, is the standpoint of Kant; the antithesis, as you will observe, of the scientific attitude, representing a revolution which may or may not be of ultimate value, but at all events possessing a peculiar significance and importance of its own, and giving, once for all, a basis for such logic and such ethics as can be held to correspond with the powers of the human, or, perhaps, even the divine, spirit.

How does a man who inaugurated a revolution of

this kind produce scepticism? Let us first determine what we mean by the word, for, like many other of the current terms in contemporary arguments, it is used in a variety of different senses. Scepticism means, in the first place, a protest against dogmatism. A protest against dogmatism can be made from different motives; it may be that we desire to confine ourselves entirely within the range of phenomena, abjure, once and for all, any consideration of *onta*, or, as Kant calls them, *noumena*—in which case we are adopting the principles of positivism. Or our motive may be a protest against dogmatism on the ground of the illimitable liberty of the human spirit. In illustration of the second sense observe that we are always cramping ourselves by the conceptions of an age into which we were not ourselves born. We accept our doctrines from our forefathers, and then attempt to pour into the old bottles the new wine of modern discoveries. We ought, however, to protest against any narrowing impulse of this kind; all conceptions which have upon them the stamp of human handiwork necessarily fail in corresponding to every aspect or element of the subject with which they deal. Our position is that they ought not, therefore, to be held in a rigid and immobile fashion, but should be kept, as it were, in a more or less fluid condition, capable of more than one interpretation, and with potentialities of future development. In both senses to which I have alluded, scepticism is a characteristic of our contemporary age, for, as I have already pointed out, in the first sense of the word, we become positivists and followers of Auguste Comte, while, in the second sense, as I understand the matter, we have accepted Kant as our intellectual father, although, in the spirit of his own teaching, we refuse to be bound by some of his pedantic and scholastic technicalities.

In neither of these senses, however, is scepticism used by many of those to whom it stands for all that is repellent in thought and practice. Scepticism is often taken to mean a blank denial of the possibility of knowledge, and when we contrast scepticism with philosophy, we generally mean that the second bids us hope that something can be attained of lasting and permanent value, which will throw light upon the vexed problems that have beset the mind of man, throughout the whole course of his turbid career; while scepticism erects as an absolute dogma, that, however we may strive, or whatever we may think we attain, knowledge,

in the sense of certainty, eludes our grasp—we are, in fact, the playthings of our own powers of infinite self-deception. In order still better to understand the relation in which scepticism stands to philosophy, let us put down a series of propositions which the first impugns and the second tries to establish. There is (1) the freedom of man; there is (2) the law of duty; there is (3) the distinction between good and evil; there is (4) virtue as an end in itself; there is (5) the immortality of the soul; and there is (6) the existence of a moral order of the universe, a divine providence, or, in simple language, the reality of God. These it is the business of philosophy to establish on a clear basis. Possibly not all of them may be equally clear, nor yet would a wise philosophy bind itself to lay down distinctions which should remain always and identically the same for every age of human progress, but, in some fashion or other, philosophy is concerned with their establishment, and it is interesting to observe that, with nearly all of them, we are in the domain of logic, psychology, and ethics, those sciences which Socrates asserted to be the preliminary to all further investigation, and which in the modern world are included in that region of metaphysics which pugnacious scientists are always attempting to demolish. One thing, at all events, is certain, that scepticism, in the last sense in which I have used the term, would have us disbelieve these truths, and if, from this point of view, we ask whether Kant has spread a spirit of scepticism through Europe, the answer will be a clear and emphatic negative. A sceptical attitude is one thing, a critical attitude is another. To deny the possibility of knowledge is to be as dogmatic as those dogmatists whom scepticism so much dislikes. But criticism has throughout been a friend of philosophy; an inconvenient friend, no doubt, who is always referring to uncomfortable facts, but still a friend, on whom Kant, at all events, will implicitly rely. And, as I shall hope to show, the final outcome of the Kantian system is not in reality destructive, but re-constructive, finding in another sphere the reality of those ideas which have been impugned by criticism, and suggesting the only line of proof by which we can hope to solve the supreme problems of knowledge.

The ultimate value of a man's work is not always that which it appears at first sight. To Kant's contemporaries it seemed as though he were delivering a formal attack on the office and functions of reason in man, but if, from the

purely historical view, we look at what happened to philosophy after him, we shall see that there was some doubt, some difference of opinion, as to the exact result of the system of their predecessor. On which of the two portions of the Kantian philosophy was the chief stress to be laid? Were we to begin from the standpoint of the Critique of the practical reason, or from that of the Critique of the pure reason? Are we to believe the intimations of the moral consciousness, or to accept the negative judgments of the logical understanding? As a mere matter of history, this doubt led to two absolutely different lines of philosophical thought. The culmination of the one is to be found in Hegel; an admirable treatment of the other issue is to be found in Lange's *History of Materialism*. Let us not, however, entangle ourselves to-night with the historical issues, but treat, for the sake of our own purposes, the work of Kant in relation to what I have already defined as scepticism. Observe, to begin with, two points. As you are doubtless aware, so far as morality is concerned, according to the Kantian system, we have to deal with what he called the practical reason, while in logic our business is with the pure or speculative reason. Now at one moment in the evolution of his system, Kant asks himself the question, "Which of these two is to be preferred?" It is as though he were endeavouring to determine which is to be the ultimate guide of a man in life, or which has most illuminating power, in the relations in which man stands to the universe of things. And he gives a perfectly frank and positive reply. The practical reason is allowed to have the supremacy over the speculative. The speculative is not to be allowed to carry out its destructive conclusions too far; it is, in point of fact, to adopt that attitude of suspense, or of disengagement, seeing the difficulties of the task which it has set itself, perfectly conscious of the objections which can be levelled against any and every ultimate idea, but also prepared to let the matter alone, to see whether, from any other source, greater illumination can be derived than from such intimations as it is itself able to offer. Whence is to be derived this further illumination? Here, too, the answer is plain; from the practical reason, from reason as exercised in the sphere of morals; ethics being a matter of more intimate concern to a man than logic. Let us look at the case from another point of view. In what aspect ought man to be considered? Purely as a thinking creature,

or as an acting creature? Look at him in the first light. Look at him as he allows his intellect to play round the problems presented to him on every side, and what do we find? We come across this remarkable conclusion, that the main result of the critical judgment of man is more largely destructive than constructive. There is nothing more isolating than the exercise of intelligence. On the ground of intellect man stands alone; if he uses it more or less than his fellows, in either sense, purely as a thinking being he is isolated from his fellows. Each on our strict line we move, as Matthew Arnold says. But now change the venue. Let us look at man as an acting creature, as one who has every kind of relation with his fellow beings, and whose energies are constantly altering those relations. So far as he acts, man discovers that he is a part of a great social order, and that no definition of him which refuses to consider his place in that order can possibly be satisfactory. There is no such thing as a single human unit in the world of action; it is always man, *plus* his environment, *plus* his heredity. It is man given a task of making the world better than he finds it. It is man at every step deeply pledged to those around him, bearing other people's burdens, as part of the burden which is imposed on himself. How absurd, therefore, to let our views of the world and of its government depend purely on the results of thought, instead of the results of human action. Man is, of a course, both a thinking and acting creature, but it is in his practical aspect, it is in all that sphere which is covered by ethics and morality, in which are to be found the real essence, the true definition, of his nature. It is thus that we may construe to ourselves the real lesson of Kant—a critic, if you like, but not a sceptic. Fearlessly critical so far as the work of intelligence is concerned; but also fearlessly constructive, because he feels the necessity of supplementing intelligence by the practical reason, by reason as exercised in the sphere of morals.

From this standpoint, then, let us regard what Kant has to tell us in that sphere which he calls the dialectic of the pure reason. In the short space of time allotted to me I cannot hope to cover the whole ground; I proceed at once to its most important feature, its criticism of the idea of God. How does he treat the proofs of God's existence?

Kant, as is well known, reviewed in his dialectic these proofs in order, and, one after another, showed their hollowness and insufficiency. How shall we prove God's existence?

Shall we argue a *contingentiâ mundi*? Shall we say that because all things in this mortal sphere are mutually dependent, we must assume in the last resource some being who is independent? Shall we say that we—looking at the fact that we can only go back from effect to a cause which is in its turn an effect of some higher cause, and so on in infinite regress,—must, for our own peace of mind, arrive at a cause which is uncaused, a First Cause, a Free Cause? Perhaps this is the most ordinary, and to most minds a satisfactory, proof of God's existence. And yet the logic of the understanding must condemn such procedure as illogical. To say that, because we only know of a ceaseless chain of causation, we must assume that somewhere or other there is a first or last link, where the chain ceases, is as though, despite our conviction that the world is round, we should yet walk to the horizon to find its extremest edge. To say that because the world is contingent, it must have an author who is absolute, is at once to deny that absoluteness we seek to prove, because at all events the world appears necessary to its author (inasmuch as it exists) and therefore sets limits to his independent and self-contained existence.

Shall we then fall back on the celebrated teleological argument, and say that because there are everywhere marks of design, there must have been a divine intelligence at work in the world's creation? Yet here again Kant tells us that our conclusion is too large for our premises. Our argument may prove the likelihood of an Intelligence, but it is merely a human one and not divine. The adaptation of means to end, in the case of a machine, proves the existence of the inventor, because with certain materials given ready to the hand—materials which possess original properties, and therefore the possibility of their own usefulness—some one must have adapted them so skilfully in their mutual relations that they work out the designed end we see. But to God, the materials with which He works are not given with certain original and unchangeable properties. He is supposed to have Himself given them, in the first instance, these natural forces and properties. Can we seriously conceive of God as having stamped certain things with qualities often contrary and conflicting, in order that afterwards He might show His skill in overcoming the difficulties of the material by skilful combination and adaptation? Or again, can this line of argumentation ever prove the existence of Absolute Goodness in the Artificer? By seeing the relation

of means to end in the wing of a bird, we may say that the skill everywhere displayed implies the existence of an Intelligence greater than ours, but not necessarily absolute. Or, once more, if I know a man to be good, I can then see how his actions are all designed to promote the triumph of goodness, but if I have only his actions to go by, shall I be likely in every case to see proofs of his goodness?

“Nature, red in tooth and claw  
With ravine, shrieks against his creed.”

There remains, then, the last of these arguments, the argument of Anselm and Descartes, which is termed the Ontological Proof. In its simpler form it asserts with Descartes that, since I know myself to be imperfect, I must have some standard of absolute perfection to measure by; to which logic answers that a belief in something more perfect than myself, not necessarily absolutely perfect, is all that my premiss warrants. In its more philosophical form it asserts with Anselm that, because the idea of God is absolute perfection, and absolute perfection necessarily includes existence, therefore God exists. To this logic has the scornful rejoinder that an idea in the mind is one thing, and existence is another, and that because I think of three hundred dollars, it does not by any means follow that I have them in my pocket. The general conclusion is that whether I rely on the cosmological, or the teleological, or the ontological argument in seeking to prove God's existence, the verdict of the logical understanding is in each case that I am trusting to a broken reed.

Such are the arguments of the logical understanding, guided by certain intellectual laws, and finding at once its strength and its weakness in the limitation which such laws impose. Even as these arguments stand, it seems unwise to lay too much stress upon them, for they indicate more than they destroy, and they convey hints of the mind's progress towards eternal truths, which are far more valuable than the merely formal proofs which they seek to destroy. Let us phrase the matter for ourselves, without paying particular attention to the historical aspects of this philosophical question, or the various ways in which Kant's successors dealt with the special conclusions of his critique. The first thing we think of is the more or less novel science of comparative religion, a discovery of the nineteenth century, which would have saved a good deal of the scepticism of the eighteenth century. For what is the main thing which is

established without a shadow of controversy by this new science? It is that in all ages of the history of human intelligence there has been an effort, conscious or unconscious, to formulate certain theories about the unseen world and the unseen God, according to the measure and capacities of the human spirit, at different stages of its development. Thus the tendency which we call "the religious tendency" is one of the inseparable concomitants of human intelligence, present to it from the first, clinging to it even through some of the more repulsive shapes of superstition, changed and altered in various ways, and now looked at under a philosophical, now sometimes even under a scientific guise, but representing always and in all places a permanent background to all the serious thought of the age. We look, in the second place, at another great nineteenth century discovery, the discovery of the law of evolution, the last and culminating point of the successive progresses of science. And here once again, if we discard the less important considerations, we find that the central fact about the world's history is the development of successively higher forms of existence, till we reach the final stage of human, conscious, and intellectual life. Each stage grows out of the preceding stage, but each stage also puts on, as it were, fresh qualities, till, at the highest point, we find gifts and capacities which contain the promise and potency, not only of an intellectual, but of a moral and even spiritual life. And when we have sufficiently estimated the results of these two enquiries, we turn back again to Kant's proofs, and a fresh light is thrown upon them, as though they, too, indicated different stages in the mind's advance towards God. The earliest feeling is one of the transitoriness of things, with which we contrast the notion of something that has been from the beginning; and that remains permanent, however much they may change. This is not an argument at all, observe; it is a mere sentiment, a feeling, which, when we seek to formulate it in precise terms, loses its emotional value, and gains no corresponding intellectual value; it is merely the *cri du cœur*, the cry of the heart, the confession, it may be, of weakness, the language of children, "crying for the light, and with no language but a cry." And then comes the higher stage, representing initial processes in argumentation, where we attempt analogically to establish the reality of an author of existence, on grounds of human industry and effort. This argument, too, fails,

although it has the support of distinguished names, for reasons which have been sufficiently indicated in Kant's treatment of the teleological argument. The position is so entirely different between the human workman, engaged with materials which he finds ready to his hands, and the divine workman, creating the materials which may be necessary for his purposes, that the analogy becomes untrustworthy and impossible. And thus, finally, we are driven to the last of the arguments, which really contains within itself the secret of the whole matter. In treating the argument of Anselm and Descartes, Kant assumes a position which the whole of his philosophical system implicitly denies; he assumes, that is to say, the entire and absolute severance between existence and thought. If Being is one thing, and our thinking about it is another, then indeed it would seem to follow that the idea of God, however definite and clear, did not carry with it the implication that such a being as God actually exists. But, as I understand the Kantian system, there is nothing higher than thought, and even though we ordinarily make a distinction between the subjective and objective aspects of any given state, phenomenon or existence, it is Thought itself which has made the distinction, and which can therefore transcend it. If there be that within us, in our own personality, which takes us altogether above the conditions of time and space—if, as I attempted to argue in a previous paper, there is a real self, or spirit, or soul, which is no longer limited, and partial, and individual, but dependent for its proper meaning and connotation on the existence of an universal consciousness—then we have a special ground on which to assert the reality of God, without whom the individual soul could have neither being nor reality.

Will it be said that to treat in this fashion Kant's critique of pure reason is to look at him through Hegelian spectacles? But he has himself authorised us so to treat him, when he wrote the *Critique of Practical Reason*. If it were only true that, side by side with his analysis of logic, there was also a treatise on the fundamental principles of morals leading to diametrically opposite conclusions, no one could say that we were historically unjust, if we elected to take our stand on the later work, and not on the earlier. But he has actually anticipated the difficulty in which we are placed; he has estimated the respective authority of the practical reason and the theoretical reason, and told us which to trust in. It

is the speculative reason which must give way in this matter, not the reason exercised in morals, to which he unhesitatingly grants supremacy. And when thus, as it seems to me, in the spirit of his own teaching, we transfer ourselves from the sphere of logic to the sphere of ethics, what is the earliest thing which we discover? We find that no consideration of man's nature can be said to be complete which does not start from the principles (1) that there is such a thing as an independent Self, free and unconstrained; (2) that this self is a centre of force, being, in its essence, Will, the only absolute cause we can come across in existence; and (3) that the consideration of man as a moral, that is to say, an acting creature, brings us by inevitable steps to the conviction that the soul is immortal, and that God exists. And here, once again, let me discard the precise formulæ, the exact language in which Kant, in the *Critique of Practical Reason*, attempts to establish verities of this kind. We can, perhaps, for our purpose, better extract what we desire by phrasing the matter in our own fashion. It can be done in several ways. We can say that the first, or rather the most important and most crucial question is not, "What is the world in which I live?" but, "What am I, who attempt to understand it?" Or else, looking at one particular aspect of the matter, we can say that natural theology is a somewhat frail and unserviceable weapon, as compared with the intimations of the moral consciousness; or perhaps, best of all, we can merely adopt for our purpose the words of Christ: "Say not, Lo here, or lo there, for the Kingdom of God is within you." Doubtless there are many indications to be gained by a purely objective investigation of natural phenomena, that the kosmos of things is incomplete without a divine intelligence running throughout the whole series from end to end. But it would be still truer to phrase the position in a slightly different manner; if, on other grounds, we have a reasonable evidence of the reality of Divine government, then we can look at nature in a different fashion, and see how the whole concatenation of causes and effects is part and parcel of a rational and intelligible idea. But it may well be doubted whether, if we began at the other end, we could ever attain to such a conclusion. If we had nothing else but nature to go by, if we confined ourselves to a purely objective examination of phenomena, there would still remain the doubt—a doubt which could not be exorcised—as to whether the results we were witnessing were due to the fortuitous

combinations of chance, or the far-seeing purposes of Divinity. That is, as it seems to me, the lesson of Kant; pure intelligence, he would say, is destructive; man does not live by logic alone. If you desire to get at the root of things, you must supplement your view of man as a thinking creature by man as a moral creature. What is destroyed, or, at all events, rendered doubtful by the first process, becomes rehabilitated by the second. The essence of man's nature is not intellect alone, but intellect *plus* feeling, *plus* practical activity.

But, you naturally ask, is it so true that moral philosophy can yield us such results? Certainly it can, on Kantian lines, and that is throughout the point of view with which I am occupied. We need only look at three points, not confining ourselves to the terminology or even the precise doctrines of Kant, but adhering, I think, to his spirit. The first is the meaning of conscience; the second is the meaning of duty; the third is the meaning of good. What is conscience? The essence of the conception, that which gives it its peculiar character, is the combination which we find in it of emotional elements and intellectual. It is the sensitive mirror on which are breathed all the shadows of our active life. It is that which lays bare with such unflinching force the relative value of all the aims and objects to which our action is directed. It steepens the intellectual recognition of what we have done or should do in a warm atmosphere of emotion. It practically denies the severance of feeling and thought, because in itself it is both feeling and thought. You may tell me that its natural history can be traced, you may say that it has arisen out of all sorts of conditions of expediency or utility. The analysis may or may not be correct, but I must remind you that explanation does not alter the value of the conception, nor does the account of how a thing came to be alter the nature of that which it is. I take conscience, as you find it in the highest, most morally developed men and women whom you know. What is this strange judging and feeling power which has guided their path in life? What can it be, except the eternal vindication of men's position as the sons of God and the inheritors of a Divine nature?

This, perhaps, someone will say, is mere rhetoric. Let us turn, therefore, to the second of those conceptions of morality to which I have already referred. What is duty? Its essence is obligation. Man feels that in reviewing possible

courses of action, there is one path which he *must* follow, that if he refuses, he has in some fashion given up his true position in nature, and that this infraction of the law of obligation will bring him under the terrible punishment of remorse. Some of us in a modern age are fond of whittling away the meaning of obligation and remorse. Remorse, we are told, is disappointment that we have made a mistake, that we have miscalculated, misinterpreted, our main interests. Remorse has nothing to do with either disappointment or miscalculation, it is not a recognition of mistakes, it is the agonised feeling that we have committed a crime. That is the imperative sanction of all morality—not an external sanction, not legal punishment, not social ostracism, but the voice, alternately pleading and threatening, of our inner moral nature. It appears then that we live under a law of obligation, and obligation implies at least two terms, the obliged, and the obliger. We understand at once who the obliged are; it is ourselves; it is we on whom is laid the difficult burden of a duty to fulfil. But it is nonsense to speak of an obliged unless the other term is equally explicit; who or what is the obliger? Is it not the Divine Spirit who rules the universe, and holds up to man the ideal at which he is, in whatever hesitating or halting fashion, forced to aim?

Turn finally to the last conception, the meaning of good. What is good? It is the attainment of happiness, says one class of thinkers. It is the subservience to the greatest interests of mankind, says another class. But good is neither happiness nor utility. If we only avail ourselves of explanations like these, we cannot unlock the secrets of man's action in the past, or read aright the historic pages which tell of many of his noblest deeds. The martyr, the leader of the forlorn hope, the preacher of a crusade, the Man who died on the cross, ask these whether good means utility or happiness, and the answer is not difficult to anticipate. But observe what follows. If good is not happiness or utility or welfare, how are we going to define it? Is it a tautological term? Are we going to say that good is that which is good? Are we to content ourselves with so vacant, so meaningless an ideal? We shall have to content ourselves with so vacant, so meaningless an ideal, if there be no God. Once grant the existence of Divinity, once grant the reality of a moral order, which is slowly being executed in all the developing series of natural existence and all the pages of the

world's history, and good is no longer meaningless; we have got the key to unlock its meaning, it is first the fulfilment of a moral order, it is next the fulfilment of the will of God. And observe how such a conception brings back to us the necessity for enlightenment, for culture, for knowledge, for thought; it is not an intuitive conception, this good; it is something the meaning of which we have to discover. We have to study science, history, in order that we may find out how the Divine Will is being fulfilled; and instead of the old arid, dry idea of being good in order that we may be happy hereafter, we have arrived at a conception whose richness and fulness are practically inexhaustible. On us is laid at once the privilege and the burden of first discovering and then helping in the fulfilment of a world-wide moral order—of being in the truest sense fellow-workers with God.

The CHAIRMAN (the Venerable Archdeacon THORNTON, D.D.).—I am sure we are all really indebted to Dr. Courtney for his very thoughtful paper, which is now open for discussion.

Mr. W. H. ROBINSON—suggested that Kant may possibly have in part derived his philosophy from that of India; after referring to the remarkable theories of the universe current there, he observed that the great difference between the Philosophy of India and that taught by Kant was, that the one said all was thought, and ended there, and the other was intended to lead us to action.

The CHAIRMAN.—There is really nothing that I can say against the paper, and therefore what I say is not in the way of discussion, but rather to profess my allegiance to Dr. Courtney in what he has said. I think he has pointed out the position of Kantian philosophy very accurately indeed. There was a period when it was not yet time for Kant to appear. We can look back to a period when it would have been too early for him to appear, but as “after the Children of Israel were sent into the brick-fields then came Moses,” so Kant was raised up at the right time. He is called the philosopher of scepticism. I think those who use this phrase confound the scepticism of Kant's philosophy with scepticism in religion. A true philosopher must be more or less a sceptic; but scepticism in

religion is quite a different thing, for religion requires an assent to certain transcendental propositions ; philosophy is not the same ; it requires no such assent. Without scepticism in natural philosophy we should never have had Bacon. If people had been content to believe that the sun turned round the earth, we should have had no true astronomy. So we must distinguish between the two. The sceptical philosopher therefore, who, like Kant, calls attention to the means whereby we have investigated philosophical questions, and rather casts a shadow over the preconceived notions of men, is a true professor of philosophy, and has brought in an epoch in philosophy which I think the paper has clearly pointed out.

The Venerable Archdeacon SINCLAIR, D.D.—I should like to say that I attribute a very high value to this paper. It is very delightful to me to recognize the old truths which we heard at Oxford so clearly set forth, particularly from this point of view,—that the argument seems to me to place the different trains of thought and reasoning, which lead us up towards the existence of the Almighty and the groundwork of our religion and faith, all in a true position, and to show them in their true light. The study of Kant's philosophy has been a great comfort to myself, and his principles are what I have always rested in with regard to my own intellectual attitude towards belief. The paper looks at the relation between belief and reason from the purely metaphysical point of view ; and we cannot, in the present day of keen intellectual activity and enquiry, present our faith to a thinking, critical, and cultivated world unless it has a proper co-ordination, as far as possible, to the current of intellectual thought. I conceive that the Kantian attitude is the soundest and best. It acknowledges and accounts for the various lines of argument by which untrained minds endeavour to verify to themselves the existence of God. It does more than that ; it suggests that finally the basis of the pure and true belief must rest upon moral grounds ; and upon those moral grounds, if I may say so, from a natural point of view. It is exceedingly important in the present day that we should not proceed on grounds that are untenable. It seems to me that a good deal of the misunderstanding that exists between men of science and culture and men of faith may be accounted for by the fact that faith is not placed before them in its proper relation. For instance, agnosticism, rightly understood, is, I think, from one point of view, the legitimate mental attitude ; we can

never know *positively* the subject matter of faith. Every one will remember that there is a distinction, that is recognised in the teaching of our Lord between faith and knowledge, which embraces even the Bible itself in its application; and it is because very often, faith, or, at any rate, the tenets of faith have been presented by men as the object of positive knowledge to their fellow men, instead of realizing the distinction between matters of faith and knowledge, that faith has been rejected by those who understood not what Kant meant. It appears to me we have suffered very much from that. The only sermon I ever preached before the University of Oxford was upon that subject—the relation of scientific knowledge to matters of faith and religion, and the true function, as I conceived it, of the mental attitude of faith.

The additions that Dr. Courtney has made to the Kantian position are, I conceive, very important; and the light he has thrown on the subject from the history of religion, as well as from the theory of evolution, must help men, I think, in the direction of belief in God and in preparing the way for that moral ground which must be the ultimate source of our confidence and our hope. I sincerely trust that this paper will be widely noticed and that it will form the basis of, perhaps, more popular and simple teaching on this subject, such as shall induce men to rest their attitude on what we certainly conceive to be the true basis of faith when properly understood in its relation to other faculties of our complex mental nature.

PROFESSOR H. LANGHORNE ORCHARD, M.A., B. Sc.—I think it has been shown that the position of Kant is not that of a sceptic, but that of a critic. His great merit, to my mind, is this—that he showed man to be not merely a psychological being, but also a moral being—that he treated man as a whole, instead of in the peculiar way in which many philosophers are accustomed to look at him. Kant assigned to the moral faculty in man the supreme department in man's nature; that, I think, is the greatest benefit he rendered to philosophy. He did that not apparently on the mere ground that the moral faculty ought to be the highest, but because the judgments of the moral faculty rest on a surer basis than those of the logical faculty. Logic depends, for its conclusions, on its premises. If the premises are false, or even one of them be false, no amount of logical reasoning will lead to a true conclusion. The truths which the moral faculties give us rest on intuitions,

hence the absolute certainty of the Kantian teaching. As to the remarks at page 178 in regard to a ceaseless chain of causation, is he prepared to defend the statements in regard thereto? The conclusion of Dr. Courtney's paper is the part which I particularly enjoyed, if he will allow me to say so. The reasoning to ultimate good was most admirable,—but is not the ultimate good merely the fulfilling of God's Will? The actual attainment of a will in complete harmony with the Supreme Law—that is, likeness to God. That, I apprehend, is the ultimate good.

Rev. A. K. CHERRILL, M.A.—I was very pleased to hear the remarks of the Chairman as to the difference between scepticism in philosophy and scepticism in religion. It seems to me that a good deal hangs upon that—in fact that interesting book, *A Defence of Scientific Doubt*, is one of the soundest outworks in defence of religion when properly considered. But with regard to the argument mainly insisted on this evening, as to our knowledge of God, it seems to me that this comparison with philosophical scepticism leads us to very important considerations in the following way:—Philosophical scepticism shows us what is the nature of the argument or proof as to the real existence of matter; for Kant shows us that we only know the phenomena, but we are obliged to believe that there lies behind the phenomena a real existence, a thing in itself of the nature of which we cannot form any opinion, because it is not given to us in our senses. This seems to my mind to present a most instructive analogy to the nature of our knowledge of God. The author of the paper referred to the fact that the belief in the existence of God has, as it were, of necessity, existed in almost every nation, and Professor Max Müller in his *Lectures on Physical Religion*, as he calls it, shows how the idea of God necessarily arises in the mind of man from the contemplation of the phenomena of nature, because when man sees effects he, of necessity, is led to infer an agent.\* Thus it appears that our beliefs in a material and spiritual reality underlying the phenomena of nature have the same origin; we realize the effect which is produced on us. For example, in the case of the sun—we first of all see a moving thing up in the

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\* As another member, the Rev. R. Collins, M.A., expresses it: "Kant taught that though the Being of God cannot be scientifically proved, yet faith possesses a *subjective* certainty which demands the obedience of mankind."—ED.

sky, and man interprets it according to his own view. In the early times he interpreted it as a small thing moving round the earth. Then he learnt to interpret it in other ways, but we do not suppose that we have yet got to the final interpretation of what the sun is in itself. All we perceive, to begin with, is the effect which it has upon us, and we gradually learn to interpret that effect, or rather to interpret our idea as to the cause of that effect, in a manner more and more approximating towards the truth. Sometimes scientific men even use the word "revelation" in regard to the things that they discover. They say this or that substance reveals to us its properties. That of course is metaphor, because the substance they conceive is not regarded as possessing intelligence. But when we use the term revelation with regard to God, as we regard Him as a personal and intelligent Being, the expression is not metaphorical—*i.e.*, we believe that God wishes us to discover Him and adapts and arranges things so that we may discover Him. But leaving that out of the question, the facts seem to be of the same order. The thing-in-itself has a certain effect, from which we argue as to the nature of the thing, and so we approximate towards an idea of it. God effects the whole universe and us as parts of it, and being influenced by those effects ourselves, we reason up to the idea of God.

There is one other point I would say a word upon and that is the chain of causes. It is a difficult question, but it seems to me that a little light is thrown upon it by this consideration, that if we regard phenomenal causation in time, we find that causes may be looked upon in two different ways, or in a certain sense we may say that things have two causes. There is the cause of a thing happening at a particular time, but besides the cause of its happening at a particular time, there is also a permanent cause. To take an illustration—suppose a stone drops, there are two causes—something or other dislodged it—that is the cause which causes the event to happen at that moment; but, besides that, there is a permanent cause, which conforms to the law of gravity and is always acting. The immediate cause which causes the thing to happen at a certain time no doubt may be brought into a chain of causes and so you may say it is not free. If something dislodged a stone from a hill-top then that event had a previous cause, and that again had a previous cause, and so on; but I do not admit that we can trace back such a thing as gravity to a

previous cause. That is, in a sense, it is free in its action—it acts according to its own nature, and not according to any external circumstance. When the stone is set free it does not move according to the cause which set it free, but according to the eternal law of motion. Of course the cause which set it free, if it were an impulsive force, would, to a certain extent, modify its motion, but only in accordance with those laws. And so with human will. I admit we act from motive—man does not act unless he has some motive, but when he is started into action he acts according to his own nature. So motive alone does not determine a man's action, but motive combined with the nature of the man who acts.

The CHAIRMAN.—We shall be glad to hear any other speakers. If not I will ask Dr. Courtney to make his reply to his critics.

The AUTHOR.—I thank you very much for the courtesy with which you have received my remarks on a subject which is extremely difficult, and on which various opinions can be held.

I was interested in what Mr. Robinson said in reference to his opinion that Kant derived some of his views from the Philosophy of India. My own knowledge of that is extremely small and is derived solely from the books of Professor Max Müller, Sir Monier Williams and others. I am aware that there is a parallel between Indian Philosophy and the early Greek Philosophy—so much so that several learned Germans have traced or thought that they have traced the origin of the early Greek Philosophy, both in India, Egypt and the East generally—for instance, Heraclitus fixed on fire as the origin of all matter from which the Parsees are supposed to have derived their belief. There is one thing that Mr. Robinson feels as much as I do. He stated in effect, that the great difference between a philosophy which says all is thought, and ends there, and a philosophy like Kant's, is, that one is intended to lead us to action and the other not. It is obvious that a mere contemplative theory of the universe leads to the theory that all action is indifferent, and a philosophy of quietism, in consequence, ends much as Mr. Robinson has stated. The value of the doctrine of Kant is that, having told us how far thought should go, he then proceeds in another treatise to refer us to the whole sphere of moral action and effort, to save us from the effect of mere contemplation. There are one or two things that occur to me. If I may be allowed to refer to Professor Orchard's remarks, he seems to assume that the argument I have referred

to in my paper is one that I should be prepared to defend. I mean as to the endless series of causation. I was merely putting in my own fashion the form in which Kant has treated that particular argument in the *Dialectic of Reason*, which comes at the end of the *Critique of Practical Reason*. The whole point turns obviously on whether you speak of phenomenal causes or not. But the question is complicated by this further point—that many people only use *cause* in the sense of *phenomenal cause*. There, I think, Mr. Cherrill is quite right. You cannot explain cause at all, unless there be something more than mere phenomenal cause. Phenomenal causes, such as they are, do not end the whole business, but they are for ever pointing to things that are not phenomenal but real—the ultimate laws by which the universe is governed.

I am deeply grateful for the kind way in which you have referred to what I have said, and with your leave, Mr. Chairman, I will add no more on this occasion.

The meeting was then adjourned.

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## REMARKS ON THE FOREGOING PAPER.

Professor J. H. BERNARD, D.D., writes:—

Trinity College, Dublin.

I have read Dr. Courtney's paper on *The Alleged Scepticism of Kant* with interest. As to the general drift of Kant's teaching, when studied as a whole, I am quite in agreement with him. The reason why Kant is always set down as a "sceptic" is that people, as a rule, read nothing of his save a few chapters of the *Kritik of Pure Reason*. As Dr. Courtney points out, the teaching of the *Practical Reason* is, that the practical necessities of life inevitably drive us into a recognition of the existence of God and a belief in the eternal future of the human soul, even though we may not be able to give a completely satisfactory justification to intellect of these great assumptions. And this positive side of the Critical Philosophy also appears in the *Kritik of Judgment*, a work which Kant regarded as the coping stone of his critical structure. That God exists, Kant seems to say to us, we cannot doubt, though

the manner of His existence must remain in large measure unknown.

T. CHAPLIN, Esq., M.D., writes:—

Standing, some months ago, in the memorial building erected to Kant at Königsberg, and musing on the line from one of his own works which serves for him as an epitaph—“*The starry heaven above me; the moral law within me*”—I naturally found myself asking (not by any means for the first time), What has been the practical outcome of the great philosopher's studies, thoughts, and teaching? Did he put already known truth upon a wider, firmer basis? Did he discover any truth not before known to mankind? Did he point out any new method of research by which the scope of man's knowledge may be widened, his conceptions of things unseen be made clearer, his power over the forces of Nature be increased? Or, did he lead men's minds away from the pursuit of truths which are demonstrable, into devious and obscure paths of metaphysical subtlety? It has seemed to me that the revolution in philosophy which Kant is said to have inaugurated, influences the thoughts of a few philosophical and (if I may so say) speculative minds, rather than serving as a guiding power to the army of scientific enquirers who have made this century which is now drawing to its close so remarkable—that it is in the barren waste of metaphysical speculation, and not in the fruitful field of experimental science, that its results are to be found.

We are greatly indebted to the author for putting before us so clearly and with so few technicalities the general drift of Kant's enquiries and doctrines, and I think all will recognise how ably and convincingly he has defended the sage of Königsberg from the imputation of any kind or degree of scepticism beyond that which is the normal habit of mind of every sincere searcher after truth. Yet, I confess that I cannot easily bring myself to believe that the arguments upon which great thinkers of former days were content to rest their belief in the existence of God are but “*a broken reed*.” To trace causes backwards until, with our limited knowledge, we can go no further, and then to take refuge in a great *First Cause*, still seems to my mind *not* unphilosophical: the *teleological argument*, now so brusquely thrust aside, seems to me *not* weakened by the consideration that the Almighty Himself gave to the materials with which He works their “*natural forces and properties*” (p. 178.) Would anyone be prepared to assert that a brass

lamp could not have been made by the hand of man, *because* the ingenuity of man had contrived to produce the compound metal which possesses the properties requisite for the same?

Whilst then we should be grateful for those philosophical considerations set before us, which afford "*a special ground on which to assert the reality of God,*" I cannot but think that these should be regarded as supplementary to older, and perhaps more easily comprehensible arguments, drawn from *cause* and *design*, and not as destructive or subversive of them. I may not, in an enquiry of this kind, quote the Apostle Paul *as an inspired writer*—philosophical investigations do not take cognizance of inspired writings—but we shall all agree that that great man had a powerful and highly cultivated intellect, and no inconsiderable knowledge of philosophy; and we find him affirming that "the invisible things of God from the creation of the world are clearly seen, *being understood by the things that are made*, even His eternal power and Godhead." St. Paul then did not reject "the teleological argument." And so also our great English philosopher: "God never wrought a miracle to convince Atheism, *because His ordinary works convince it.*" We shall not therefore err in bad company if we still keep to the old paths, whilst appreciating any new light that may be thrown upon them by the more modern thinker; and it may be well to give due weight to another saying of Bacon, namely, that "a little philosophy inclineth man's mind to atheism, but depth in philosophy bringeth men's minds about to religion."

Professor DUNS, D.D., F.R.S.E., writes:—

I have read Dr. Courtney's paper with much interest. It is an able review and criticism of several important aspects of Kantian philosophy, held by thinkers to beget and favour scepticism. A philosophic spirit, wide, yet acute and accurate, thinking, crisp "phrasing," and firm grasp of the leading lines of Kantian thought characterize the paper throughout. It is very suggestive. A worthy and full criticism would be longer than the essay itself. I limit my remarks to one feature mainly. That Dr. Courtney's standpoint is that of Kant, and that he sympathetically identifies himself with the philosopher's own attitude to, and estimate of, the subjects dealt with, will be held by some to add weight to his paper. Others will think that he thereby lays himself open to hostile criticism. What they wish to know is not

Kant's view of the bent and bearing of his own positions, but what were the views of his contemporaries regarding them? In a word, most will attach more importance to the opinions of a philosophic critic, touching the questions handled here, than to those of a sympathetic expositor and apologist. When Kant relegated belief in God, Immortality, and human Freedom to the sphere of the transcendental—the intuitional, incomprehensible, insoluble—he, no doubt, thought he was conferring a great boon not only on philosophy but on religion itself.\* But his followers refused to see this, and even hastened to employ his transcendental conceptions to buttress the fabric reared by Hume,—“Whatever lies beyond experience is incapable of proof.” The question which Hume faced was “Have we any ideas independent of Experience?” And his answer was “Experience itself is incompetent to determine absolute truth.” All, then, that Experience itself could do, was to beget scepticism. Kant asked what is the nature of the Experience which thus landed thinkers in scepticism? This led him to subject Reason to critical investigation. Discarding the views of the prevailing sensational school, he harked back on *à priori* elements of knowledge, and, sifting them, he concluded that there are two sources of knowledge, experience and understanding. All our knowledge begins with the former, but there is a knowledge independent of it—ideas that are universal and certain, not absolutely, but only subjectively true. Thus perfect knowledge, that is, knowledge of things in themselves, is impossible. Was not Lewes right when he affirmed,—“We regard the result of Kant's investigation of the elements of thought as nothing less than a scientific basis for Scepticism?” I think he was, and, if so, then the chief contention of this paper will at least be doubtful. Even throughout it, point after point occurs suggestive of the influence of Hume on Kant, and most interpreters of the Kantian philosophy to other than metaphysical experts, have directed special attention to the fact that “it was chiefly the scepticism of Hume which incited Kant to the construction of his critical philosophy” (*Ueberweg*). Indeed, Kant himself puts his indebtedness to Hume in a very graphic way. Thus, as to the conception of causality, he says,—“I confess freely that it was the exception

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\* This would suggest that there were causes operating at the time which tended to errors which Kant wrote his critiques to combat.—ED.

taken by David Hume which many years ago first interrupted my dogmatic slumber, and gave to my enquiries in the field of speculative philosophy an altogether new direction." "He brought no light into this species of knowledge, but he struck, nevertheless, a spark from which a light might well have been kindled, if it had fallen on susceptible tinder." I give prominence to this because of its bearing on the allegation against which Dr. Courtney argues, and because it raises the crucial question:—Did Kant's criticism of Hume eliminate from the Scotsman's philosophy the sceptical element with which, as all admit, it is charged? Now the answer to this was not,—“the conception of the connection between cause and effect is not necessarily (as Hume believed) of empirical derivation.” It was “the understanding conceives *à priori* connections among things.” The metaphysicians may make something of this, but outsiders will express their want of satisfaction by asking other questions: What was its outcome? What kind of fruit did it bear? What was its influence on German religious thought? Kantian philosophy is more than pure metaphysics. The leading intuitions of the speculative Reason are religious. A satisfactory refutation of the assertion of “the French critic that Kant has spread through the whole of Europe the spirit of doubt,” must take into account that scepticism is more than “a protest against dogmatism and the illimitable liberty of the human spirit.” It must deal with it as the denial of dogma in religion and ethics, a denial which soon became the *zeit geist*, the very temper of the time, when the Kantian metaphysics was fresh and influential. And, doubtless, we are warranted to trace that phase of universal scepticism which, even before Kant's death, began to prevail among the Lutheran clergy, to the influence of Kant's writings. Can we apart from them, account for the heresies of the Tübingen school—the pure and historical myths of Strauss, or the Hegelianism of Baur, who held the miraculous to be impossible, the supernatural non-existent, or only an illusion of the natural, and Christianity to be no more than the ultimate natural outcome of rational thought?

I had marked some passages in connection with which a good deal might be said as to Kant's views of the theistic argument from Final Causes, the fruits of the cosmological idea, and chiefly, the immense service to psychology and religion itself which his virtual acceptance of the Aristotelian dictum—“Intuition must be the beginning of science”—might have rendered, had he not pressed the intuitional into the shifting sphere of the Practical Reason

where it might become operative, and, as a dictate of the moral nature, supersede the teaching of Revelation, thus making an *historical* theology impossible. But even to make good any call to discuss these topics in remarks on Dr. Courtney's paper would lead us too far afield. Having in view Hume's influence on Kant, my object in these remarks was to suggest, that the sceptical outcome of the writings of both might be identical, and that a good deal might be said on the side of the French critic's sweeping statement, "Kant has spread through the whole of Europe the spirit of doubt." I think the history of religious thought both in Europe and America is strongly in his favour.

The Rev. J. J. LIAS, M.A., writes :—

The paper on the whole is a useful and a helpful one, but there are some points in it which appear to me open to criticism. I am afraid my acquaintance with Kant's *Critique of Pure Reason* is not exhaustive, but one is not disabled thereby from endeavouring to exercise pure reason upon the questions treated therein.

First of all, the statement in the second page that before we can arrive at any conclusion on phenomena, it is necessary to investigate the conditions of being and knowledge, and to study logic, ethics, and psychology, seems at least questionable. That some study of the conditions of *knowledge* preceded progress in physical science is undoubtedly the case; but it was simply a question of method, as Dr. Whewell shows in his *History of the Inductive Sciences*. The barrenness of the physical science of the ancients was almost entirely due to the fact that they used the deductive instead of the inductive method, and based their philosophy on dogma instead of on observation. But no very considerable progress had been made in psychology when Bacon laid the foundation of the inductive method, nor does he appear to have depended much upon the scientific teaching of logic or of ethics: nor, on the other hand, is physical science usually supposed to have owed much to Kant. It is a question whether its advance would not have been as rapid if Kant had never written a line.

Dr. Courtney's distinction between criticism and scepticism as applied to Kant's method is striking, and it appears to me conclusive. But I must venture to question the soundness of that method as applied to the Being of God. The necessity which an ordinary mind feels to be imposed upon it of finding some ultimate cause of things is in no sense disposed of by the illustration

of a man walking to the horizon to find the extremest edge of the world, which, after all, is admitted to be round. Illustrations are proverbially dangerous; they are almost sure to fail you at the critical point: they serve to point Bishop Butler's moral that the imagination is the source of every error that has led mankind astray. The argument should be turned just the other way. If we came to the edge of the world, we should know that it was *not* round. The very essence of the argument from design is that on all practical principles it is the evidence that a *mind* has been at work, not that a series which may go on to infinity must of necessity stop somewhere, "which," to use Euclid's words, "is absurd." But if a mind has been at work, it must have been a Mind of extraordinary grasp, depth, penetration and power. The argument from design moreover does not stand alone. It points to a Great Being, but it does not solve the problem of His Nature. Then the assumption that the argument from design assumes an author who is "absolute" (p. 178), is, I may venture to contend, disposed of in my paper ("Considerations on the Unknowable of Modern Thought") read before the Institute in 1883. (Vol. xvii, p. 98.) I have there contended that if by "absolute" we mean that which has no connection with anything else, the word is inapplicable to a Creator of the world, and if we mean that which has no *necessary* connection with anything else, it involves at least an assumption which we have no right to make, and which is at least in direct conflict with the words "God is Love." Then we are told that if there *be* an intelligence at work in the creation of the world "it is merely a human one, and not divine." This, it must be presumed, means analogous rather to a human than a Divine Mind. For a human mind most certainly could neither have conceived nor have carried out the plan of creation. And the objection moreover begs the question, for, except from phenomena, we have no means of arriving at any conclusions as to the nature of the Divine Mind. There appears to me no reason whatever why I should not "seriously conceive of God as having stamped certain things with qualities often contrary and conflicting," and as having nevertheless been pleased to "overcome the difficulties of the material by skilful combination and adaptation." That He did the one *in order that* He might do the other is an assumption of Dr. Courtney's. It is equally possible that He did so in order that He might thereby stimulate His reasoning creatures to inquiry, and provide them with material for the exercise of their reasoning powers. Dr. Courtney then further makes a rather startling

statement, namely, that the "Ontological" argument is the "last" argument in favour of the Being of God. I had thought that a powerful additional argument had been drawn from the character and constitution of man. I was under the impression that the moral character of man, his sense of justice, honesty, duty, truth, tended to imply the existence of a Being in Whom these qualities were inherent, and in Whose Image man was made. I moreover imagined that the spiritual character of man, his disposition to awe, reverence, worship, tended to indicate the existence of a Being in Whom those qualities might find a fit sphere of exercise. And lastly, I had supposed that the evidence of history appeared to point to a wise Disposer of events, who was engaged in educating man on a large scale, and apparently with a view of fitting him ultimately for existence in an order of things in which he would be able to make a fitting use of the education he had received.

Dr. Courtney, however, does at last shake himself free from the fetters imposed on him by his master. He eschews his "terminology" and "even" his "precise doctrines," though he claims still to be animated by "his spirit." In Dr. Courtney's contention that we find the solution of the question of the Being of God in the questions, What is conscience? What is duty? and What is good? there can be no difference between us. It is in the great facts which underlie the visible universe that the secret of God's Being is to be found. The revelation of Wisdom and Order in the phenomena brought to light by physical science, of goodness and purity in the history of the workings and progress of the human conscience, of Majesty and Vastness as discerned through the spiritual cravings of man after something higher and worthier than himself, of the profoundest depths of beneficence and Love, felt to be working themselves out in a moral order which at once permeates and transcends the natural—all these combine to point us to One Who is not only the Creator and Master of the world He has created, but Who, as the Apostle puts it, is the God and Father of all, eternally "above all, and through all, and in all."

REMARKS BY THE REV. KENNETH S. MACDONALD, M.A., D.D.

I do not think that there is any real justification of the idea that Kant himself was a sceptic, or that his works taken as a whole encourage doubt or scepticism in regard to the great verities of religion or morals. It is quite true, and in that alone lies the

plausibility of the sceptic's position, that Kant regarded the cognitive faculty or "the pure reason," as incompetent to *prove* or *demonstrate*, as the propositions of Euclid are demonstrated, the problems of religion and ethics. But those who regarded such demonstrations as possible have always been few among believers. Believers have rested their faith on the *probability*, the strong moral probability, of the truth of these great fundamental propositions. The support which the "practical reason" gives them is all that is necessary, or indeed desirable, to make them reasonable. To give to them a demonstrable certitude would have been to paralyse them as tests of moral character. He who wills to will the will of God will find in Kant abundant evidence in support of the truth of these doctrines.

It must also not be forgotten that if Kant has made it clear that the truth of these doctrines cannot be demonstrated, he has made it equally clear that their falsity cannot be demonstrated. The cognitive faculty is equally incompetent to disprove them. This uncertainty in which the pure reason leaves these problems is not to the Christian a matter of grief—except so far as it is wrested by the infidel to his own ruin. The Christian regards it as a special provision of God for the good of man that these problems should rest only on a reasonable probability. Kant so regarded it. This fact protects him on the one hand from superstitious fanaticism and on the other from religious self-abandonment, in addition to the moral tonic which it supplies to his whole nature. Hence the warm cordial language which Kant uses in regard to those very arguments which he regards, when tested by pure reason, as insufficient. Here is an illustration:—"This proof" (that founded on design) "deserves to be named always with reverence. It is the oldest, the clearest, and the most suited to our common understanding. It animates the study of nature, which gives existence to it, and acquires thereby ever new power. It shows ends and intentions where our own observation would never of itself have discovered them, and extends our knowledge of nature through guidance of a peculiar unity, the principle of which is above nature. The new knowledge acts back again, towards its cause, its originating idea, and exalts our belief in a Supreme Originator into an irresistible conviction." R., ii, p. 485.\*

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\* In R. & S.'s Edition, see note, page 200.

Then, the tone of Kant's ethics is of the very highest kind, not that limp molluscous kind which is so common now-a-days. He finds all true morals most intimately related to the existence of God, as proved by the practical reason, the reality of a moral order and the freedom of the will of man. To him the goodness of the will is the only absolute good on earth; practical reason, the revealer of moral order, is the governor of will, constituting it good; and the human will itself is essentially free in order to goodness. This last, according to Kant, is indeed the grand essential to morality.

Recognising sin as universal and the need of an atonement and a justification through Christ, and thus a conversion from evil to good, what a beautiful picture he draws of the true Church of Christ,—“a great family under a common though invisible moral Father, acting through His Son Who knows His will, and who at the same time is bound to all the other members of the Family by ties of blood.” R. x., 121.\*

Then in regard to the Bible, it is instructive that he accepts what he calls “*the principle of reasonable modesty* with regard to all that is called revelation,” as established by the critically enlightened reason of modern times. “For as we cannot deny the *possibility* of the divine origin of a book which in a practical point of view contains nothing but divine truth; it is best to take the book which we find generally recognised as sacred, and make it the foundation of the teaching of the Church.” R. x., 159.

I do not mean to say that Kant was an orthodox Christian. He never looked at the questions or problems of Christianity from that standpoint; but I do mean to say that looking at them from the standpoint of a mere philosopher, his words do not justify the charge brought against him by the French critic that “Kant has spread through the whole of Europe the spirit of doubt.” The author has drawn a very important distinction, and in the case of Kant one of great practical value, between the *sceptical* attitude which men of the atheistic and we may say agnostic stamp assume, and the *critical* attitude of the philosopher.

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\* As all readers may not recognise this reference, Professor Wallace, of Oxford, has kindly given me the full title of the publication, it is:—“*Rosenkranz and Schubert's Edition of Kant's Works.*”—ED.

## THE AUTHOR'S REPLY.

I have read, with attention, the remarks made upon my paper by various critics. My only object was to present, as faithfully as I was able, what seemed to me to be the intention of Kant, in his *Critique of Practical Reason*, in order to defend him from a special charge. I do not wholly identify myself with his doctrines, nor do I desire to maintain, in all their detail, his particular arguments on the being of God.

I observe, however, that one or two of those who have been good enough to send comments on my paper have fallen foul of Kant's treatment of the teleological argument. There is, of course, a narrower form of the design argument, as well as a wider one. That the whole universe bears the traces of intelligence is a proposition which, so far as I can see, no sane thinker attempts to attack. It must be remembered, however, that this is not the form of the design argument which Kant had in mind. I should think that historically there was no doubt that the attempt to explain the structures of creation in detail, solely on the ground of the purpose they were supposed to fulfil, led science and knowledge on the wrong track. When Aristotle made use of a similar argument, he was much embarrassed by the existence of such awkward things in creation as whirlwinds and morasses, and other matters. It is in reference to some such state of mind as this, I imagine, that Kant attacks the use of the teleological argument. It is clear that, when we admire any ordinary product of human skill—such, for instance, as a cleverly constructed watch or piece of machinery—our admiration is largely based on the fact that, in the case before us, the artist, engineer or workman has been able to conquer certain difficulties of his material in accomplishing his result. The fact that he has to deal with a form of matter which is not of itself either helpful or useful, is of the very essence of our admiration for his skill. This will, I think, explain why Kant believes the teleological argument to be based on a purely human analogy. The idea is that matter is one thing, and the artist or engineer another, and that the human agent has to accept the material in which he works as something extraneous to him, and

possessing qualities of its own. But now observe that, as applied to the Divine Artificer of the universe, this analogy is wholly inadequate. According to the hypothesis of creation, both the material and the form afterwards impressed upon that material come from one and the same source. We can hardly conceive of the Almighty first making an indifferent matter, and then showing His skill by bending that alien matter to His purposes. In such a case there can be no opposition between matter and form, except on a Manichean supposition that matter exists independently of the will of God, and is capable of interfering with His volitions. And there is still another point. In the case of the human artificer, we say that his adaptation of an alien material is very clever and ingenious. If we apply the same argument to the works of creation, we may be entitled to say that the Divine Artificer is extremely clever, or extremely ingenious, but hardly that He is omnipotent. All that the analogy will give us is an increase of intensity in the attribute, but not that universality of power, or that universality of knowledge, which we accept as the characteristics of Divinity. This, so far as I can see, is the meaning of Kant's attack on the ordinary use of the design argument in nature, but of course the point to which I am referring needs far more comment and illustration than I have at present space to bestow.

I would only add that there is nothing in Kant's argument, in my judgment, which militates against that large and comprehensive design in this world for which the scientific name is evolution, because the assumption on which it rests is by no means founded on human analogies, but begins by the supposition that matter contains within itself the promise and potency of future development.

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## ORDINARY MEETING.\*

THE PRESIDENT, SIR G. G. STOKES, BART., IN THE CHAIR.

The Minutes of the last Meeting were read and confirmed, and the following Elections were announced :—

ASSOCIATES :—R. J. Snape, Esq., M.A., London ; Rev. Kenneth S. Macdonald, M.A., D.D., India.

The following paper was then read by the Author :—

*ON THE COMPARISON OF ASIATIC LANGUAGES.*

By Major C. R. CONDER, R.E., D.C.L., LL.D., M.R.A.S.

## INTRODUCTORY.

SINCE the power of articulate speech is one of the most distinctive attributes of man, there is, perhaps, no more useful or fascinating study than that of the growth of language, nor any which is more likely to shed light on the difficult questions of prehistoric events and conditions. Yet the question which forms the subject of this paper is one of great difficulty, and which has often suffered from hasty treatment ; and it is inevitable that an attempt to enquire into the ultimate relationship of different families of speech, should meet with objections not less formidable than were those encountered by the fathers of the true comparative study of the Aryan languages, who laid the basis of our present knowledge some fifty years since.

The main difficulty lies in the continual and sometimes rapid change of language from generation to generation, which is most marked among peoples who have no literature capable of maintaining a standard, and among scattered tribes holding little intercourse. I have been told that among

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\* 9th of 28th Session.

the Kaffres, when the absence of springs and streams separates the various settlements by great distances, the change in pronunciation is sometimes so rapid that, in the third or fourth generation, the members of an isolated group become unable to understand the speech of the parent tribe; and when we consider the lapse of many centuries, it may well seem impossible that the original words of such languages should be recoverable, even by the aid of a wide, comparative study. We are often told that the condition of primitive man is best illustrated by the study of the modern savage races of Africa and of America. Yet it seems to be in these cases assumed that those whom we now know as savages can never have existed in any other state, and this although, on the discovery of America, existing civilisations were encountered, which have since been destroyed, and traces of old past civilisations (including literature and monumental writing) in Central America, which had then already perished, leaving only the great ruins of former cities. Even in Africa, when it is considered that physical and other characteristics have been shown, by men of science, to connect the wild Bushman (distinguished for his love of drawing and power of dramatic imitation) with the ancient civilised Egyptian, we may well pause before concluding that the ancestors of the bushmen were as wild and uncultivated as are their present descendants.

It is not, then, among modern savages that we can expect to find, in recognisable condition, the original languages of the world. But if scholars be correct in classing the languages of America with the Turanian family of speech in Asia, and in suggesting an ultimate connection between Semitic and African speech, the latter (as regards Kaffre languages at least) being also connected with that of Australia, it would follow that in considering the most ancient languages of Asia, we are able to get at the very foundations of the speech of man as a whole.\* The present

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\* The Mongolic character of Japanese is shown clearly by W. G. Aston ("Grammar of Japanese." Triibner, 1877). The American languages are classed as Turanian with the Euskaric and Esquimaux. They show the ordinary peculiarities of this family—agglutination, the use of postpositions, absence of gender, and formation of the verb by auxiliaries. The Berber languages show connection with Egyptian and Coptic in structure and in the pronouns. The Caucasian dialects, though much mixed and decayed, show inflection, and the case suffixes of Aryan speech. The languages of Melanesia are connected with the speech of the southern

paper is confined to the discussion of the main historic groups—Mongolic, Aryan, and Semitic—but it is generally admitted that the South Turanian dialects, and the Japanese, are ultimately connected with the Mongolic (or, as it is otherwise called, the Altaic), although the absence of early civilisation has resulted in the growth of so many dialects, that, in China alone they number nearly 400 in all, that which is generally called Chinese being radically the speech of the Mongolic immigrants from the West.

The races among whom the earliest civilisation is found—the Akkadians, the Babylonians and the Egyptians—possessed the art of writing so early that the disintegration of language proceeded among them much more slowly than among illiterate savages. The commonest words of daily life, which were no doubt at once the most ancient and the most widely used, were also, fortunately, the least subject to changes—from their simplicity and constant use. The language of the Akkadians can be traced to, at least, 2500 B.C., while monumental examples of Egyptian are equally ancient. The Aryans are the last to appear on the historic scene; yet, in Asia Minor, our knowledge is carried back to 800 B.C., in the case of Phrygian, and to 500 B.C., in Persia, while the oldest hymns of the Vedas are referred, by Max Müller, to 1500 B.C. Comparative study of later historic languages is thus, in the case of those under consideration, checked and assisted by the existence of monumental texts, of an antiquity which is equal to that of most of the prehistoric remains found in other parts of the world.

Each of the three great Asiatic groups is very distinct, and well separated by grammar, by pronunciation, and by vocabulary. Each has been, and still must be, separately studied, and internal comparisons instituted among its members, without reference to the study of the other groups. But the question now to be raised is whether we are not already able to perceive that a yet wider comparison, if based on safe principles, is possible between the ultimate

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part of the Asiatic continent, and distinguished from those of Australia and Tasmania, which are said to compare with African speech. Mr. C. Bertin connects the Bushmen with the Egyptian race. As regards the Dravidian and Kolarian languages of India, they are classed by Professor Lacouperie as Himalaic-Turanian, and he even places the Andaman and Australian in the same group. The Thibeto-Burmese forms one family of the Kûenlunic group to which he refers the Chinese and Anamese, being the next to the Turkic as a Turanian group. This practically exhausts the list of human languages all connected ultimately with Asia.

forms of the various main divisions. This enquiry has often been attempted in a fragmentary manner, and very remarkable results have been noted. Thus Egyptian has been seen to present similarities to both Aryan and Semitic speech. Chinese has been said to be comparable with both Mongolic and Aryan languages in some of its words. The identity of roots Aryan and Mongolic has been indicated by Tomaschek and Donner. The similarities between certain Aryan and Semitic roots were carefully (though not always correctly) recorded by Gesenius; the connection of Akkadian and Chinese was indicated by Lenormant, while others have seen in the Akkadian an Aryan element; and others, again (following Halévy), have denied that it is anything more than a Semitic language. Are we to suppose that in each case the scholars in question—who were all trained linguists, and not mere dabblers in language—have been misled by a few chance coincidences? or, may we not rather be led to suspect that some real connection does exist, binding together languages which, however different in structure, were once spoken in parts of Asia not far distant from each other?

Against such a view two main objections are raised. First that the resemblances are accidental, or due to the same causes leading to like results in independent cases. Secondly, that the similarities are due to the interchange of foreign, or “loan” words, between various and originally distinct languages. It is certain that an apparent similarity often disappears when we trace back the words to their oldest forms, and it is also certain that from a very early time the trading relations, which bound the various civilised peoples together, led to the interchange of many foreign words for foreign objects; but while these circumstances should render us very cautious in research, they do not suffice to dispose of the main question. It becomes a matter of careful study to ascertain how far these resemblances are traceable in the earliest radical forms of the oldest languages, and how far they are concerned with common objects and ideas, which it is not natural to suppose would have been expressed by foreign words. As regards independent adoption of like words, while it is easy to imagine that simple sounds—imitative of natural ones—might so appear in languages not really connected, the same cannot be said when more developed roots, and parts of speech, are found to be common to the various great stocks.

My only claim to speak on such a subject lies in the fact

that nearly half my life has been spent in foreign lands, and among primitive peoples, and that I have been forced by circumstances to acquire the speech of those with whom I dwelt—for eight years among Italian peasants, for six among Arabs and Turks, and for one year among Kaffres and Hottentots, in regions only since that time incorporated in our Empire. The study of antiquity, at the same time, has obliged me to enquire into the dead languages of Asia; and practical knowledge of the vulgar dialects has shown me, as it has shown others, that languages are older than their written grammars, and that the archaic speech of peasants is more nervous, more simple, and more symbolic, than are the polished phrases of literary authors, and of the later standard style. But at the same time the absolute importance of recognising the distinctions, in grammar and in sound, which now divide the great groups from each other, is only the more forcibly impressed on the mind by hearing the actual conversation of various races.

And first as regards sounds. The distinction of sounds nearly akin increases with increase of civilisation, and with increased delicacy of ear. The scientific alphabets of to-day distinguish no less than 86 sounds, including 27 vowels; but the oldest Semitic alphabets, rich as they are in sounds hardly distinguished by an European ear, are limited to 22 letters; and the oldest inscriptions in these take no note of the short vowel sounds. The Akkadian was only accustomed to mark 17 sounds in writing, and when the Greeks used the Cypriote syllabary they had to content themselves with 14 sounds. With this we may contrast the alphabets of their descendants, the Turks, having 32 letters against the 17 in Akkadian, the Arabs 28 against 22 in Hebrew, and the writers of Sanskrit no less than 50 against the 14 of the Cypriote syllabary. Nor was this small amount of distinction due to want of graphic power, for the symbols have decreased steadily in number, while the precision of distinction has increased, and the additional letters are very generally distinguished from the older only by an added dot or line. The distinctions are also, in very many cases, only marked in literature, and not clearly discernable in the speech of the ignorant, so that one of two kindred sounds becomes characteristic of one dialect, and another takes its place in a second dialect of the same language. It is on this peculiarity that the comparative study of European languages rests, as on a secure basis; and it has become more and

more apparent to scholars that we cannot really call one of such dialects older than the other, or point to any one of the oldest languages as the parent of all the others.

Broadly distinguishing the sounds into four great groups—*vowels*, *gutturals*, *dentals*, and *labials*, we find that sounds which are uttered by the same parts of the mouth have a tendency to pass into one another; and that certain of the more delicate distinctions are not traceable to the earliest period. The guttural comes from the throat, and passes into the palatal; the dental is sounded within the teeth; the labial by aid of the lips, and in each case there is a cross distinction, according as the letter is strong, weak, or nasalised. In all cases the dentals are the most numerous, and the labials furnish the fewest distinctions of sound. But different languages differ greatly in the proportionate use of the three classes of sound; so that while nine-tenths of a Bushman's words consist of gutturals with an added vowel, the soft and liquid speech of the Bechuana Kaffres consists mainly of palatals and labials with many vowels, such as seem natural to a thick-lipped people, who have, it may be observed, adopted none of those clicks which the Zulu borrows from the conquered Hottentot.

The sounds of our own language are co-extensive with the more broadly distinguishable sounds of speech in general, although as regards both vowels and consonants there are many well-known distinctions, which we do not mark in writing. As regards vowels the older systems do not distinguish more than three or four, though the early Aryans found it necessary to have a notation for at least ten (five long and five short), and their descendants in the east have made yet further distinction. The Hebrew letters *Aleph*, *Yod*, and *Vau*, though not regarded by grammarians as vowels, have in fact the sound of the three long vowels most commonly distinguished, while the *Ain* is a guttural vowel of which the sounds (for it represents several) can only be learned from Orientals, yet which (as we shall observe later) easily pass into that of the *Aleph* or of the *Vau*.

As regards the gutturals there is, I think, not one used in Semitic speech which is not also found in European speech. In Turkish and Mongol speech, although the gutturals are even more numerous than in Semitic languages, they are nevertheless freely interchanged in the various dialects, as Vambéry has shown. In the dialects of Palestine there is

also considerable difference in the pronunciation of the gutturals, and in some the *Koph* is not distinguished from the *Kaf*, while the *Jim* has a different sound in the Arabic of Syria and of Egypt.

This interchange is yet more remarkable in the more numerous dental sounds. T and D are interchanged in various dialects, and in others T becomes S. The Z sounds also merge into S on one side, and into Dh or D on the other. Thus the Hebrew Z becomes the Aramean D. The Palestine peasants pronounce the Th as S, and the Dh as Z, and they do not always distinguish the three forms of the sibilant, which are distinct in literary language. So also on the Moabite Stone, and on the Siloam inscription, we do not find the hard T (*Tith*), which occurs in later Phœnician texts, and in Hebrew we have cognate roots in the hard and soft T and in D, and also in D and Z. Another very weak letter is N, which is euphoniously changed into M, and also into L. In Semitic and in Aryan languages alike the N is often introduced into the middle of a root, which in other dialects exists without it. In the Cypriote Greek the N is often absent from words of which we are accustomed to regard it as a radical letter, as, for instance, *Anthropos*.

The L and R are of all letters those which appear to have been the latest to be specialised. In Egyptian there is no distinction between them. In Chinese there is no R, and no L in Japanese. In Mongolic languages they are both at times interchanged with T or D, and in Turkic the native roots never begin with L or with R. The L of the Finnic dialects becomes T in Turkic; thus the word *lil* "ghost" becomes *tit* in some dialects. The same is remarkable in the Bechuana language, which makes no distinction between L, R, and D.

The labials are equally liable to merge into one another. The Galileans and Samaritans appear to have been reproached with the confusion of these and of other letters. The Arabs have lost, or never possessed, the P sound, which they cannot distinguish from B. The Mongolic languages show us the interchange of P, B, and V, and the B becomes V in modern Greek. Aryan roots in B have also cognate roots in V or W, and in all languages to be considered this softening occurs, while M and V are also little distinguished, as we see, for instance, in the Cypriote syllabary.

These changes are due to euphonic laws, which arise from the attempt to render pronunciation easier, and which we

see well exemplified in Zend, when *S* becomes *H*\* before *a*, and *Sh* before *i* and *u*, and where *T* and *D* become *S* before another *t*, and *Sh* before *é*. *K* is also softened to *é* before *t*, and *j* becomes *h* before *t*. If we wish to represent the most distinct sounds, of the many which shade into each other, they may be classified in a simple table of nine consonants, as follows :—

		Gutturals.		Dentals.		Labials.
Strong	...	k	...	t (= r = l)	...	p.
Weak	...	g	...	s	...	v.
Nasal	...	ng	...	n	...	m.

and under these headings all the more ancient and widespread roots in the Asiatic languages might easily be classed.

Before considering the relationship of these languages we must briefly glance at each of the three groups in turn, and at the present condition of comparative study of their internal relationship; and in so doing it is convenient to begin with the Aryan, as the most carefully studied group. But a few words are necessary in the first place as to the distinction made between what is called “agglutination,” and what is known as “inflection” in language generally.

If it be admitted (as is generally taught) that languages spring from certain roots, which contain ideas of actions, and that words are formed by the putting together of such roots, it will appear that what are called monosyllabic languages have no real existence. The oldest roots are monosyllables, probably in every language, but even Chinese is not really a language where these monosyllables stand alone. Its verbs are formed by the prefixes *ching* and *tso*, and its nouns in their oldest forms are seen to be built up from more than one syllable, though in modern Chinese they have been recontracted to a single sound, by the general decay of the language. In all Asiatic tongues we find words in various stages of decay, due to the natural attempt to make conversation easier and more rapid, which has for centuries tended so to wear them down. In some cases the combinations are easily resolved into distinct roots, in others the original form is difficult to perceive, or even lost. The first condition is *agglutinative*, or “glued together,” the second is *inflectional*, or decayed agglutination. No language is entirely free from one or other form, but in

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\* The interchange of *S* and *H* also occurs in Semitic languages. The Assyrian and Hadramaut *S* (in the personal pronoun and voice of the verb) becomes *H* in Hebrew and in Himyarite.

Mongolic speech inflexion is little marked, and in Aryan or Semitic languages it has proceeded very far. In English and in Persian we find a yet further stage of advance, in which the old inflexions are discarded as cumbersome, and new agglutinations take their place as being simpler. For instance, the word "shepherd" is clearly soluble into *sheep* and *herd*, but the origin of "shearer" is forgotten, though the *er* comes from an old word for "man," and the compound was once understood to mean a "man who shears." The noun cases of the German have been relinquished in English, because the prepositions gave a simpler method (sufficient in itself) for the distinction of case, and the verb in like manner is for the most part easily aided by auxiliaries, and discards the old inflexions of tense and mood, which themselves arose from older auxiliary additions. Turkish is a language dear to the grammarian for its simplicity, due to the regularity with which its case suffixes (taking the place of prepositions) and its complete system of auxiliaries (for moods and tenses of the verb), are applied to every root; while in German we have an instance of inflections which have decayed and lost their original value, and which now form impediments rather than aids to speech, from which encumbrances the English language has set itself free. Such peculiarities, therefore, denote various stages of growth and decay, and of new growth; but they do not fix a barrier of complete distinction between the various great groups. The differences, in short, are differences of degree, and not of kind. Some languages stop short at a certain stage, or advance very slowly. The Egyptian is an instance in which inflexion never seems to have developed very completely; the Chinese is an instance of a language which has greatly decayed. It would seem that when races of one group came in contact with races, equally civilised, of another group, and remained in intercourse, the result was an advance in language; but that when the civilised race is isolated among more savage populations, speaking in archaic and varying dialects, the tendency is to decay. This is in our own times very remarkable in the degradation of the Dutch language in the Transvaal, where for several generations the descendants of civilised Europeans have been isolated among native tribes, Hottentot and Kaffre. The advance of language is, on the other hand, well marked in the case of the Finnic peoples, who have long dwelt in contact with the European Aryans.

### ARYAN LANGUAGES.

The study of the comparison of Aryan languages was placed on a sure foundation, not much more than half a century ago, by the band of great scholars, among whose names those of Bopp and Grimm are perhaps the most widely famous. Of late years, however, great advance has been made in the true appreciation of their connection; and the name of J. Schmidt will be remembered as that of the writer who has substituted for the older idea of a genealogy of languages, that of a parallel growth of dialects, developing with the growth of the tribes of Europe, in their various centres. This change of method has two results. One that it requires a much less extended period of time to account for the variations of the dialects, and the other that it recognises in Aryan speech the same mode of development which had already been recognised in Semitic and Mongolic languages.

The fierce controversies (full of political *virus*), which raged of late as to the home of the Aryans, appear to have been laid at rest by the calm and moderate exposition of Dr. O. Schrader, whose interesting volume is remarkable for its bold confession of the uncertainties which still surround its subject. His conclusion that the cradle of the race (as a distinct stock) is to be sought on the Southern Steppes near the Volga, seems destined to be generally accepted; but it in no wise conflicts with the contention of Max Müller, that the parents of the race came from Asia. Although the various Aryan tongues form a complete chain, starting from the Volga, and meeting again in Armenia, yet a very marked division into two great groups—European and Asiatic—exists,\* and the migrations from the Volga centre

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\* A certain number of Phrygian words are known, and are all Aryan, of the European section. Aryan words, given by Greek writers as Lydian and Carian, are also known. Armenian, though it has many Turanian and even some Semitic words, has been shown to be an Aryan language between Slavonic and Zendic; many Armenian words compare with Georgian. The language of Lycia, which I have specially studied, proves to be an Iranian language comparable with Zend and Sanskrit, but influenced by Greek (see "Journal Royal Asiatic Society," where I have treated the question at length). I believe the Vannic dialect to be clearly akin to Lycian and Persian. The names of Medes and other Asia Minor and Armenian chiefs, encountered by the Assyrians, are clearly Aryan, and belong to the Iranian group. Herodotus speaks, however, of a Phrygian colony in Armenia, whose language was no doubt the old form of the present Armenian.

were in two directions, westwards and eastwards, the ancestors of the Asiatics having, before their languages diverged, possessed a considerable amount of civilisation. Dr. Max Müller has shown that in the interval of less than 5,000 years, the whole growth of Aryan speech may have proceeded from the separation of the descendants of some two or three original families; and unless it is contended that these were first created on the banks of the Volga, there is no linguistic reason for denying that these families may have migrated thither from some Asiatic country. The condition of these original families has been very variously estimated, but the evidence is indisputable which shows that they already possessed a certain civilisation, being not only a pastoral people, but also growing grain, and probably travelling in rude waggons. They could count and could build, they acknowledged rulers and family relationships, though it would seem that they had no method of writing until they learnt the art from other races. However much their culture may have been over estimated, it is impossible to show that they were mere savage hunters, scarcely superior to the wild beasts that they encountered. Their condition was similar in short to that which has independently been established by linguistic evidence, for the early ancestors of the Semitic and Mongolic races.

The labours of such scholars as Fick, Curtius, and others, have reduced the Aryan languages to a list of about 450 original roots, but it has been perceived by Max Müller that this enumeration errs rather on the side of excess than of the reverse. In an interesting paper on the "Simplicity of Language," he claims that the list may be yet further condensed to an original enumeration of not more than 150 roots, which, by subsequent variation, and by the building up of words, has produced the enormous totals of modern vocabularies. It is inevitable that differences of opinion should exist as to the attribution to the true root of many difficult words; but the roots as a whole are so well established that they may safely be used for the purposes of a wider comparison; and many of the doubts and contradictions which are due to an exclusive study of Aryan speech will, in the future, be cleared away by such wider comparison with the other Asiatic languages.

The Aryan roots are of three kinds, namely: 1st, those consisting of a single consonant with a single vowel; 2nd, those with two consonants and one vowel; and 3rd, those

with three consonants forming two syllables. This last group is very generally recognised to represent the early building up of words, by the combination of two monosyllabic roots; but, as regards the second category, they have been variously looked upon as original efforts of speech, or as inflexions which result from an original combination of the first or simplest class of monosyllables. As regards this point it is remarkable that we have many series of roots having the same beginning, but ending in a guttural, a dental, or a labial; and they can therefore be arranged as species of a single genus, of which the original form is the simple syllable of the first category. As an instance we may cite the root BHA, "to shine," with the extended forms BHAK (guttural), BHAS (dental), and BHAN or BHAM (labial). From the first comes the Sanskrit *bhā*, "to shine"; from the second the Latin *fax*, "torch"; from the third the Sanskrit *bhas*, "to shine," or "appear," and from the last, the Greek *φαίνειν* "to appear," the Irish *ban*, "white." The same extension of the root is very generally observable, as in WA, "to breathe," WAK, "speech," WAR, "speech:" or WA, "to weave," WADH, "to weave," and WABH, "to weave." From such instances we may perhaps conclude that the original roots are those of the first or simplest class.

When we come to consider these simplest roots we find that they also exist in several forms, according to the position and character of the vowel. Thus we have both AW and WA, "to breathe"; and both WA and WI, "to weave"; AR and RA, "to roar"; MA and MI, "to diminish." But what is still more remarkable, we have often the same idea conveyed by a guttural, a dental, or a labial, as DA, "to go," GA, "to go," and PA, "to go:" DA, "to say," KA, "to call," and BHA, "to speak." In some of these cases the extended form only is found in Aryan speech, but the simple form still survives in Mongolic languages. Such arrangement of the Aryan roots seems to show that the original speech of the race must have been extremely simple, and included very few sounds. The meaning was probably emphasised and assisted by the use of gestures, and of various tones of voice. This we notice among all primitive peoples. The gesticulations of an Italian peasant, or of an Arab, are so systematised as often to render speech quite unnecessary; and the dramatic powers of the Bushman are so remarkable as to be materially important in the explanation of the meaning conveyed by his very limited vocabulary. It is indeed to this imitative faculty in man

that we owe the early attempts at pictorial representation, whence proceeded picture-writing, and from it hieroglyphics, syllabaries, and alphabets; each stage rendered necessary by the growing power, volume, and complexity of speech.

It is not here proposed to enter into the question of the origin of these simple sounds. It is clear that many of them suggest the imitation of natural sounds, and not improbable that this is the true origin, wherever such an explanation is possible. The names of many animals are clearly imitative of their cries, and when we find in Egyptian the words *Ba*, for "sheep"; *Mau*, for "cat"; *fufu*, for "dog" (the old historic bow-wow); we are surely approaching very near to the origin of language. The word *Shu*, for "wind," is very suggestive of what we call the sighing or sighing of the breeze. And when we turn to Chinese and discover *Maau* to be also the cat in that language, we see that it is quite as possible that it arose independently, as that it marks a connection of language at such a great distance in Asia. But this "bow-wow theory," though it is indisputably the explanation of many roots, encounters a difficulty when we come to consider certain ideas, like those of light, height, &c., which are unconnected with sound. Nor does the recent suggestion that certain acts were accompanied by certain sounds appear to recommend itself as a natural explanation.

To return to the Aryans: although the simplicity of the roots of their speech is so great, its advance had also been great in the earliest times to which we can trace them; and we shall find that they share not only the first and the second category of their roots with other Asiatics, but even in many cases the third. Before attempting to consider this important question, we must, however, turn to other groups of languages.

#### MONGOLIC LANGUAGES.

The Mongolic races are often depreciated as stolid and unimprovable. The civilisation of China and Japan is forgotten; and the adaptability of the Turkish race, as shown by the inclusion of many foreign words in their language, which in this respect resembles our own. The advance of knowledge shows that this conservative character is due, not to original barbarism whence the race has never emerged, but rather to the fact that the Mongolic peoples were the first to attain to civilisation of a very advanced type. They were the rulers of Asia, while the Hebrews were still shepherds.

and while the rude Aryans had as yet not appeared on the page of history. They were probably the first to use metals, and to possess weapons superior to the flint knives, hatchets, spears, and arrows, of other races. They were the teachers of Phœnicians and Babylonians, and probably the earliest artists of Italy and Syria.\* Vambéry, whose career originated in the desire to trace the Hungarians to their home in Asia, has uttered an eloquent protest against the Aryan prejudice on this subject, and the discovery of the Akkadian language, by Sir Henry Rawlinson, has placed the question of Mongolic civilisation in a new and truer light. In speaking of Akkadian as Mongolic, I am aware that its vocabulary has been found to present very remarkable resemblances to both Aryan and Semitic speech; but it is by grammar rather than by vocabulary that languages are best classified, and judged by this test we must accept the conclusion of the great scholars who have followed Sir Henry Rawlinson, and the latest contributions of Lenormant and of Hommel to the question.

Three great divisions of this group of languages may be recognised (1), the Mongol proper, spoken over a wide extent of Asia; (2), the Turkic in the steppes of Central Asia; and (3), the Finnic and Ugric in Europe; but all these divisions are intimately connected, by vocabulary, by grammar, and by the identity of suffixes and pronouns; they are all remarkable for agglutination, and for the almost entire absence of inflexion, save when Aryan influence has tended to cause such an advance. The labours of Castren, Donner, Böhlingk, and

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\* It is to this group that I refer the Hittite language. Since reading a paper on this subject to the Victoria Institute, a letter has been published from a Hittite Prince to Amenophis III. It proves, as I supposed, to be in a dialect closely akin to the Akkadian. Another long letter, by the King of Mitani, called Dusratta, to his relative, Amenophis III, is in a similar language. Its case endings are the same as in Turkish, and many of the words are Akkadian. Mitani was the country of the *Men*, a tribe who invaded Egypt in the Hyksos period, and they lived in Commagene, east of the Euphrates, close to the Hittite country. I think, also, that Dr. Isaac Taylor has proved by numerals and other words that the Etruscans were Mongols from Asia Minor, but the Umbrians, Oscans, and other early Italian tribes were Aryans, akin to the Latins and Celts. An even older race akin to the ancient Egyptians and Berbers is believed, in prehistoric times, to have existed in Italy, and on all the Mediterranean shores, in its islands, in France and Spain, and even on the south shores of England.

Vambéry, and of many other distinguished scholars, have established a comparative study of dialects and languages, reaching from Siberia to Hungary, which, though less perfect than that of the more-studied Aryan languages, is equally based on sound scholarship and research. The number of roots to which the vocabularies are reduced is even smaller than that of the Aryan system, because they are more easily divided from their added suffixes, and are found to be almost entirely monosyllabic. Vambéry enumerates about 200 roots for Turkic speech, and these recur in the other divisions of the group. The third category of Aryan roots, which are bisyllabic, appears to be almost entirely absent, and the distinction of letters and of vowels is much less perfect in Mongolic languages than in those of our own ancestors.

Another peculiarity which marks these languages, and which is distinctly traceable in Akkadian, is that of "vowel harmony," by which is meant that the vowel of the weaker root in a compound varies in accordance with that of the stronger root to which it is attached. We may, perhaps, conjecture that the same harmony once existed also in Aryan speech, and that it is still discoverable in the parallel instance of roots having the same meaning but different vowels (as in the case of WA and WI, "to weave," already cited); but if so it ceased at an early period to be a law of language.

The fact already cited that a simple root may be reversed, as in the case of AR and RA, is also important for comparative purposes. The modern Turkic dialects generally prefer, in such cases, to put the vowel first, as easiest of pronunciation; but in Akkadian we constantly meet with both forms. Among the peasantry of Palestine this inversion of the syllable is very clearly to be remarked. Thus, for instance, the word which means "wells" is at pleasure *Biyâr* or *Abiar*; and in the same way the Hebrew *Ben*, "son," becomes *Ibn* in Arabic. It is well known that both Arabs and Hindoos find it difficult to begin some words with the letter S, so that, in the mouths of both, Mr. Smith invariably becomes *Esmî*.

We must touch in passing on the relation of Chinese to Mongolic speech, though the question is one full of special difficulties—Chinese being a very decayed language, in which sounds originally distinct have become much confused. Its vocabulary, however, still represents a recognisable connection with that of its western neighbours; and attempts have even been made to compare Chinese directly with Akkadian. We suffer, however from the fact that we have

no early information. The oldest inscriptions are not referred to a period older than the ninth century B.C. ; and the ancient civilisation of China (in which Voltaire believed) has been shown by the labours of many scholars to be a baseless boast due to national vanity. The Cantonese dialect, which is said to spring direct from the oldest known Chinese, when compared with the Mandarin language, shows us how rapid the decay has been ; and the *tones* which are now so important for the distinction of words of like sound, have been proved to be of comparatively late origin, and to have been gradually elaborated, increasing in number as time went on. This device is analogous to the Hottentot device of clicks, to distinguish the similar sounds of an African language. Among the great civilised races such systems of distinction have been unnecessary, since compound words present a sufficient variety for purposes of distinction. It is evident that great caution is necessary in the treatment of Chinese ; and that the comparison of the existing sounds with those of such a language as the Akkadian, may sometimes be very misleading, unless the steps by which the modern word came to be formed can be traced to a sufficient antiquity.

#### SEMITIC LANGUAGES.

The Semitic languages form a very small and compact group of dialects spoken within a comparatively small area of Asia, bordering on Egypt ; and they present many peculiarities, which unite them to each other so very closely, that they might almost still be regarded as dialects only.\* It seems at the outset very improbable that so small a group can be independent of others ; but the tendency of late has been to suppose that they are to be connected rather with African than with Asiatic speech. This appears to me to be a reversing of the true problem, for reasons to be presently

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\* The Marquess of Bute read a valuable paper on the "Language of Tenerife," to the British Association this year (published by Masters and Co., London), and on studying this I find that it was clearly an old Berber language. About 180 words of this ancient language are known. Some of the sentences of the Tenerife language are preserved, and are of great interest, such as their proverb : "May he live and feel the evils of fate." This subject I have also treated in full, in the *Scottish Review*, and have indicated the Semitic connection of the language. Inscriptions have been found in the Canaries, in an alphabet said to be similar to that of Carthage and Numidia. The Canary islanders had the interesting custom of making mummies, like the Egyptians, and used the same word, *Khu*, to express the "corpse" or "mummy" that was used in Egypt.

explained. Meantime the answer given to all who have attempted to compare Semitic and other Asiatic languages is, that a radical distinction exists in the structure of the Semitic languages, because they spring, not from monosyllabic, but from bisyllabic roots. When, however, we consider the number of very ancient monosyllabic words in Hebrew, such as *Ab*, "father"; *Ben*, "son"; *Gub*, "pit"; *Gu*, "middle," &c., &c., when we hear in ordinary Arab conversation that monosyllabic words play much the same part as in other languages; we may begin to doubt whether the strict insistence on triliteral roots is not rather a learned system, than a peculiar feature of the genius of the language. And this doubt continues when we inspect Hebrew grammars and dictionaries, and find that Semitic languages have indeed some monosyllabic roots, though these are treated as due to contraction.

A Hebrew dictionary contains nearly 1,500 roots, but out of these not a third in all are *perfect*, that is to say, consist of three consonants forming two syllables. The rest, called *quiescent*, *defective*, and *double*, are either formed with a vowel, or are monosyllabic in the imperative, which is the true root in every language. The perfect roots are similar to the third class of Aryan roots, and they represent an advanced stage in language, such as will not be denied to be that reached by Semitic speech. These perfect roots are, in some cases as we shall see, the same in sound and meaning found in Aryan languages; and in many cases they can be resolved into an original monosyllable with a suffix, much as in other languages. Thus we find *Bud*, "separate"; *Badāl*, "separate"; *Badāk*, "cleave"; where the suffixes *l* and *k* have evidently been attached to the old original root *Bad*, which may be compared with the Aryan root *Blid*, "to divide." In other cases the roots are formed by prefixing *N*, which, however, disappears in the imperative, as for instance the verb *Nagash*, "to draw near," of which the imperative is *Gésh*. This prefixed *N* occurs in parts of the verb in languages not Semitic, and forms the *Niphal* form in Hebrew, with passive signification, appearing to be an ancient auxiliary attached to the real root. Such indications, and others which need not now be detailed, may incline us to suppose that the original roots of Semitic languages were monosyllables, and that the present structure arises from the preference for secondary roots, as more distinctly conveying a special signification; and the fact that many of these secondary roots

occur also in Aryan speech seems to indicate a connection, which still existed when language had advanced from its most primitive stages.

But we are able perhaps still further to advance the study of the origin of Semitic languages, by a comparison with one of the oldest forms of human speech—namely, the Egyptian. The labours of Birch, Brugsch, Renouf, and Pierret, have furnished us with a very copious vocabulary, and a complete grammar of the Egyptian. It is indeed said that Coptic alone can be properly considered comparable with its immediate ancestor; and the classing of Egyptian with any one of the great Asiatic groups is still regarded with disfavour.\* About 150 Egyptian words are very similar to the Akkadian, and a smaller number are very close to Aryan roots, and at least 200 are almost identical with Semitic words. Yet Dr. Birch, whose knowledge of Chinese and of Semitic languages gives great authority to his words, was, I believe, of opinion that Egyptian should be classed with Semitic languages. The same opinion was held very strongly by the late C. Bertin, who possessed a wide, linguistic knowledge, and the reasons given appear to me to be very strong ones: for not only the grammatical structure and syntax are similar, but the terminations of masculine and feminine, the pronouns, the prepositions, and other parts of speech, are almost identical. It is naturally objected that Egyptian is not an inflected language; but this seems to render the comparison the more valuable. The old language stopped short, while that of the early Semitic peoples advanced; and for this reason is the more capable of assisting our search.

So for instance, in both Aryan and Semitic speech, we find an *s* prefixed to the old root, and forming secondary roots. In Egyptian this *s*, which is an ancient auxiliary, is recognised as being the sign of the causative. In making such comparison it should be understood that I speak, not of the many nouns which seem to be loan words borrowed directly from Semitic peoples, but of the common roots of the language, concerned with the most ordinary human actions. In Egyptian and in Akkadian alike we find common words

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\* The Berber or Libyan languages, as Champollion perceived, are connected with ancient Egyptian, and many words indeed remain almost unchanged as well as the forms of pronouns and particles.

which recall in turn each of the three great Asiatic groups. The reason may be that these very ancient languages go back beyond the time of the special and separate growth of Mongol, Aryan, and Semitic speech. To compare the nouns of one language with those of another will generally be unconvincing, but when we are able to compare the roots, whence such nouns are formed, and from which the verbs and other parts of speech also spring, we are following a method safer, and more likely to lead to real conclusions. It is now therefore proposed to attempt such a comparison, and to draw such general deductions from it as may serve to cast a light (however dim) on the earliest conditions of the human race in Asia.

### COMPARISON OF ROOTS.

The table appended to this paper may perhaps serve to call attention to the possibilities of such a method, though it cannot claim to be more than a preliminary sketch. It appears to me legitimate to suppose that changes in vowel sound, such as we find in all dialects, occur also in the roots of the three groups, and that the letters which we know to be only distinguished with difficulty are not original distinctions, but the result of a constant specialisation of sound, due to the increasing power of language in distinguishing shades of meaning. But it will not be found that any very ingenious process is necessary, since the comparisons are much easier than would at first be expected. Nor will it be found, I think, that I have been misled by foreign words, which have been carefully excluded from consideration as affording no evidence of the true connection.

About 170 roots, all connected with the most ordinary ideas of action, serve to connect together the various groups of Asiatic languages, and of these about 50 are still traceable throughout the entire number, that is to say in Akkadian, in Egyptian, in Aryan, in Semitic, and in Mongolic speech alike. It appears to me that the number alone is sufficient to prove that these resemblances are not accidental, and especially so, since the more advanced languages—the Aryan and Semitic—in a great many cases agree not only in the monosyllabic, but also in the derived bisyllabic roots. But beyond such a comparison of roots it is difficult, if not impossible, to proceed. In grammatical construction, in pronouns, and in syntax, the various groups are separated by cardinal differences which must not be overlooked. Two

great groups are thus distinguished; first, the languages which place the genitive before its nominative, and use the pronouns M "me" and T "thee," that is to say the Mongolic and the Aryan (the one agglutinative, the other advanced far in inflection); and second, the languages which place the genitive after the nominative and use the pronouns ANK "I" and ANT "thou," that is to say, the Egyptian and Semitic tongues (the one agglutinative, the other advanced far in inflection). This division does not indeed forbid us to suppose a remote common origin, such as the list of common roots indicates, but it forbids us to make such comparisons as that of Irish and Hebrew, which disregard the structure of the two languages; and it shows us that the separation of the northern and southern families of Asiatic man must have occurred at a very early period.

The personal pronouns are very distinct in the various languages under consideration, because (as we are usually taught) they grew out of old demonstratives, and were differently specialised among different peoples. These old demonstratives in turn grew out of yet older roots, which had the meaning of "being" or "moving," and from which various names for man were formed. In the same way the terminations of case, or the prepositions forming the same distinctions, had a similar origin. The roots and some of the demonstratives have the same value in all the languages under consideration; but the later use of these differs exceedingly. The commonest of all are MA, SA, and KA, which deserve a special notice. In Akkadian *ma* means "this" and "I," and in Aryan speech we have *ma*, "this," while in Assyrian *ma* is also a demonstrative. It probably comes from the old root MA or AM, "to be." In like manner SA, which means a "man" or "person" in Akkadian and Egyptian, becomes the demonstrative *sa*, "he," in Aryan speech, in Assyrian, in Egyptian, and in Mongolic. It probably comes from the old root AS, to "breathe." In some languages, like Greek, Zend, and Hebrew, the S becomes H, and thus we get the demonstrative *ó* "the," and the Hebrew *Ha*, "the"; *Hu*, "he"; and the English "he," all from the same root, SA or HA. The general meaning of the third root KA is "who" in all the languages under consideration. In Egyptian we may perhaps find its origin in *ka*, a "man" or "male." It is also remarkable that the pronoun ANK, "I," in Egyptian and Semitic speech, may be compared with the Akkadian *an-ag*, meaning "this same"; and the second

pronoun, ANT, may have arisen in the same manner from the demonstrative *Te, Ze, Se*, which is common to Aryan and Mongolic speech, as meaning "thou."

The particles which form the cases of the noun, are in like manner very widely distributed with small variation of meaning, and their origin is traceable in Akkadian and Egyptian. The commonest come from the roots BU, "to be"; AL, "to rise"; RA, "to go"; NA, "to walk"; AN, "to breathe," to which the Aryan and Semitic, with the Egyptian, add the less common TAR, "to pass" or "reach." The particle AD, "to" or "at," whence the Assyrian *adi* and the Akkadian *ta*, may arise from the old root DA, "to move." On such simple foundations the system of particles, which form so material an element in civilised speech, appears gradually to have arisen, with innumerable modifications and changes in various languages. The early demonstratives alone enable us to see that such words do not of necessity involve a primary separation, but rather indicate a primary connection of all the great Asiatic groups.

There is, I believe, nothing very new or heretical in such a proposition. The method of development, which is the same throughout, has been separately followed by scholars in the various languages, and the similarities of both roots and particles has often been pointed out. Dr. Isaac Taylor has been the first boldly to claim an ultimate connection between Finnic and Aryan languages, and has given many cogent reasons for his view which have not been met. Quite recently, I believe, at the Oriental Congress of 1891, the similarities of Egyptian to Aryan and Semitic speech have again been pointed out, and though I have not had the advantage of reading what was then said, these comparisons are so evident that they must strike every enquirer. But what is more interesting is that Egyptian often supplies the link between words which might otherwise be thought to have no connection. Thus, for instance, MAR means "to die" in Aryan languages, but in Semitic speech the root is MAT. At an early period when R and T were not distinguished, these roots might be the same. In Egyptian we find both *mer* and *met* for "to die," and it is not conceivable that for such an idea a foreign word would be used. The root MAR means "to crumble" or "decay," and in this sense is not unknown in Semitic speech.

Dr. Isaac Taylor's proposition is, however, capable of greater development than that of his original publication.

Not only do the roots which he observes in Finnic languages, as well as in Aryan, exist also in Turkic and Mongol speech, when they are beyond suspicion of Aryan influence, but they are very often traceable also in Akkadian, back to at least 2000 B.C.; and as shown in the table of common roots, they can further be traced to Egyptian and Semitic vocabularies. In the same manner the comparisons which Gesenius hazarded, when as yet the comparative study of Aryan speech was in its infancy, are confirmed by that study, since the roots have been extended from the Greek, on which he mainly relied, to the whole circle of European speech. The Semitic languages are singularly rich in distinctions of meaning, and in the addition of new roots formed from the old, but those which remain clearly traceable to one old common form are so numerous as at once to reduce the vocabulary by considerably more than half, and in the end it would appear that the original roots are not more numerous in Semitic than those of other families of speech. The traditional pronunciation of Hebrew will often mislead us in such enquiry, since it is no more reliable than in our modern conventional pronunciation of Latin or Greek, but we are fortunately able to attain to some certainty as to the real pronunciation, by means of the Assyrian syllabary, as compared with the living languages of Syria and Arabia. The Hebrew points which now guide us were only invented in the sixth century A.D., but that it was possible to read without them is clearly shown by the existence of Hebrew, Moabite, and Phœnician unpointed inscriptions. The simple elements of the original Semitic grammar did not in fact depend on those distinctions which are now indicated by the points and diacritical signs.

In making such comparisons we may well feel astonished, not that such wide difference should have arisen, but rather that the original connection should remain so clearly traceable. It has been often said that the similarities of language are more valuable as evidence than are the dissimilarities. We do not doubt that our Aryan ancestors had mouths because we call it "mouth," while the Italian uses the word *bocca*; but when we turn from *bocca* to the French *bouche*, we at once recognise an original connection. Various words have been used by various sections of a people of common original vocabulary, and many old words have died out in various degrees among various peoples. It is remarkable that though the Aryans lived by rivers, their original word for "fish" has been lost, and in this manner the common

names for a flora and fauna are only valuable as regards *positive* results: the *negative* results cast little light on the subject, because in the course of migration the names of beasts, birds, and trees (once well known to their ancestors), may have been forgotten, in lands where they were not found, or transferred, as we know to have been the case to other animals in the new home. A curious instance of such renaming occurs in the case of the Boers in Africa, whose ideas were very limited and founded on second-hand information. Thus they called the giraffe "the camel," and the jackal, "the wolf," and the leopard "the tiger," in countries where neither camels, tigers, nor wolves really existed, while for the *gnu* they could find no name appropriate, and consequently called it only "the wild beast."

In this connection it is worth noticing also that the original distinction of various animals is very imperfect. Those which are useful to man, or those which are conspicuous or dangerous, are the first to be named; but many which interest the educated student are overlooked by the ignorant. Thus in Syria I found it almost impossible to collect the names of any of the smaller song birds, no agreement existing among my informants. Only a very few kinds of fish are distinguished, and plants and flowers are often unnoticed. The names for ox, sheep, camel, and other important animals are, on the other hand, remarkably numerous and distinctive.

Turning from such questions to consider the simple roots consisting of one consonant and one vowel, which run through all the Asiatic languages, and from which it would seem probable that the second and third classes of roots are built up, we find that they are easily arranged in seven classes, according as they refer to the sensations connected with various organs, 1st, life or breathing with the nose; 2nd, light, sight, and fire, with the eye; 3rd, sound, with ear; 4th, movement, with the leg; 5th, swallowing, eating and drinking with the mouth; 6th, holding and striking, with the hand; and 7th, work, which however is not very clearly distinguishable from the preceding class. A final class of roots which, with two exceptions, are secondary (having two consonants) refers to love and desire. In each class there is a cross division, according as the sound is a simple vowel, or a guttural, a dental, or a labial. The list which follows will be found to be supported by the results of the comparative table of nearly 200 common roots.

## PRIMARY ROOTS.

Vowel.	Guttural.	Dental.	Labial.
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## CLASS I.—BREATHING.

AW, "to blow" ...	GA, "to be born" ...	SU, "generate" ...	PU, "to generate."
WA, "to blow" ...	... ..	AS, "breathe" ...	BHU, "to breathe."
		AN, "to breathe" ...	MA, "to be."

## CLASS II.—LIGHT.

AI, "bright" ...	AK, "to see" ...	DA, "see."	
	KU, "bright" ...	IS, "light" ...	BHA, "shine."
		US, "burn."	
		SAI, "see."	
		AR, "burn, shine."	

## CLASS III.—SOUND.

A, "ah" ...	KA, "cry" ...	RA RU, "rear" ...	BHA, "speak."
O, "oh" ...	GU, "cry" ...	NA, "speak" ...	MU, "bellow."

## CLASS IV.—MOVEMENT.

YA, "go" ...	AK, GA, "go" ...	DA, DU, "go" ...	PA, PAD, "go."
		SU, "blow."	
		SA, "go."	
		IS, "speed."	
		RI, LI, "flow."	
		RA RU, "go."	
		AI, "rise."	
		NA, "go."	

## CLASS V.—SWALLOWING.

YA, "go" ...	GHA, "swallow" ...	AD, "eat" ...	PA, "feed."
	AG, "choke" ...	AS, "eat" ...	PI, "drink."

## CLASS VI.—TOUCHING. HITTING.

YA, "go" ...	... ..	TA, "beat."
		AS, "throw."
		DA, "put" "take."

## CLASS VII.—WORK.

WA, "bind" ...	GA, "bend" ...	SU, "join" ...	AP, "join."
		AK, "join."	
		NA, "join."	

## CLASS VIII.—DESIRE.

AW, "love" ...	KAM, "love" ...	RA, "delight" ...	(BAS, "kiss"?)
WAN, "honor" ...	KUBH, "desire" ...	LAS, "desire."	
	NAD, "pleasure" ...	LUBH, "love."	

These very simple roots can, in many cases, be recognised as natural exclamations, or as imitations of animal and other natural sounds. Some remain in the nursery vocabularies of our own times, such as *Moo*, "to bellow." The word *puff puff*, for a train, has been created within the last half century from the old root PU, "to blow," and is an interesting instance

of the reduplication of a root representing continuous action. In many grammars, such as the Akkadian, Egyptian, or Sanskrit, the reduplication has such a force, and it appears to have been the very oldest way of expressing the plural. Many animals appear to us to utter cries, expressed by such sounds as *Mu* and *Mau*, *Ba*, &c., and the names for crows and similar birds are taken from their *caw*. A parrot can utter such sounds, and some we hear from a dog. But the great dividing line between human speech and animal cries seems to lie in the power, which no known animal has been proved to possess, of putting together, with an intelligible object, two distinct sounds, uttered with different parts of the mouth, and conventionally received as expressing a definite sense. And these double sounds we encounter in human speech in all the earliest languages to which we have access. Thus from *DU*, "to go," we obtain *DUK*, "to lead"; from *BHA*, "to shine," are formed *BHAS*, *BHAK*, *BHAN*; from *KA*, "to call," we obtain *KAR*, *KAK*, *KAL*, and *KAN*; from *RA*, "to roar," *RAG*, *RAS*, *RABH*; from *PA*, to "go," *PAD*, *PAR*, and *BHAG*. In some cases we can still trace the origin of the secondary root, as in *KAK*, to "cackle," which is a simple reduplication of *KA*, "to call." The Chinese method of joining two roots in what is called a "clamshell" word, for the greater distinction of the sense intended, seems to cast light on the formation of the secondary roots, so that *RAG*, for instance, might have been originally made up of *RA*, "to roar," and *KA*, "to cry." Whatever be the truth as to such speculation, it can, I think, hardly be doubted that the evidence will be found strongly in favour of an original community of true *speech* for Asiatic man.

We are often reminded that questions of race and of language must be separately treated, since changes of language have occurred in various parts of the world. But it cannot be forgotten that in Asia, as far as we are able to speak of either a pure language or a pure race, even in the earliest ages, the great families of speech are found to be co-extensive with the great races which have used them throughout the course of history. When languages change or die, it is usually because the old stock also changes or dies. When conquerors hold a country they do *not* succeed in imposing their speech on their more numerous subjects, but themselves absorb into that speech words from the vocabulary of the native. Thus English has grown out of the mingling of the Latin and Teutonic and Celtic races,

and has absorbed words from each vocabulary. The Anglo-Indian vocabulary absorbs Indian words, and the Kaffre language has contributed to the Boer vocabulary. In Syria, Greek was the official tongue for nearly a thousand years, yet the native language, though absorbing many Greek words, remained but little changed, when the Moslem conquest restored its predominance; and this tongue was always spoken side by side with Greek, throughout these thousand years.

When we go back to the dawn of history we find the same. Egyptian is full of foreign loan-words, so is Assyrian, so, too, are the early Aryan languages. The populations of Western Asia, from 2000 B.C., were much mingled, and intermarried, as we know from the history of Egyptian kings wedded to Babylonians and Hittites. It seems probable, therefore, that, even in very early times, it would have been difficult to point to a perfectly pure stock, and we are not astonished to find skulls of very various characters mingled together in prehistoric graveyards. If it be difficult in Eastern Europe to distinguish a type as that of the original speakers of Aryan dialects, it is not the less certain that Aryan and Mongol languages, from very early times, were spoken by the mingled populations of this region, as they still continue to be spoken. In Egypt itself we find both the round-headed and the long-headed man, as well as in Italy or Asia Minor. But on the complexity of such study of race it is not necessary to say more, since the publication of the cautious opinion of Professor Virchow in your "Transactions."

Taking, then, fully into account the difficulties so noticed, it still remains roughly the case that the speakers of Aryan and Semitic languages are long-headed, and those of Mongolic languages, round-headed. It is also remarkable that Aryan and Semitic speech has, in common, bisyllabic roots not found, as a rule, in Mongolic vocabularies. One would, therefore, be inclined to think that the Mongolic races were the first to separate from the rest of the great stock; but, as we shall see in the sequel, the Semitic peoples were in contact with Egypt much more closely than with any other group, and remained so in contact to a much later period of civilised development. The relations of the various races, seem, in short, to reproduce exactly the relationship of the Aryan dialects. There is no genealogy which can derive one class of languages from another, but rather a shading

into each other of dialects, in accordance with geographical situation—the Aryans to the North, the Turanians towards the East, the Semitic peoples on the West, joining on to the Egyptians.

### GENERAL RESULTS.

The utmost variety of opinion exists as to the homes of the various stocks, showing that the linguistic argument is at best a weak one. The Aryan has been transferred from Central Asia to Norway, and brought back again from thence to the Volga. The Semitic ancestor has been placed in Central Asia, in Arabia, and in Egypt. The Mongol has been traced from the Oxus, or from the Medic highlands. In each case the argument is based exclusively on the study of one class of languages. But if it be really true that these have a common origin, it is to a common centre that we must seek to trace the Asiatics. To me it seems clear that the linguistic requirements would all be met by supposing that the original home was in the healthy highlands, near the source of the Euphrates, whence we may conceive the first Aryan family to have migrated to the Volga, the first Semitic family to have followed the great rivers towards Arabia, and the first Mongolic family to have gone eastwards towards Central Asia. At a later period the returning currents brought them again towards the centre. The Egyptian and the Semite came up from the South, the Akkadian Mongol poured down from the highlands into Chaldea and Syria.\* The pure Aryan came from Persia, and from Greece, to meet in Asia Minor, and the mingling of the peoples (with exception of the Aryans) is traced from about 2500 B.C., and continued in Western Asia from that time forwards. But meantime the great classes of language had been formed, and no subsequent borrowing of words affected very materially the grammatical structure of the distinct groups, which had grown up at separate centres.

We are led, therefore, to inquire if any light is thrown by language on the condition of primitive Asiatics, and of the early races when they came again into contact, through the growth of population, from the various centres. The positive

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\* The Akkadians, as shown in Mr. Pinches' recent paper, had reached the Lebanon and Sinai in 2500 B.C., and the Egyptian mines in Sinai are equally ancient.

evidence is very small, and the negative is (as has been observed) not very reliable; but the subject is of such interest that an attempt to throw light upon it, however imperfectly, will perhaps be considered of value. The points to which attention is usually called by linguists, in such enquiry, concern the knowledge of metals and weapons, of animals and plants, of cattle and agriculture, of dress and food, of the computation of time, of dwellings, crafts, family, and religion. A few words may therefore be devoted to each in turn.

It will be generally allowed that the discovery of the use of metals was not made by primitive man. The Egyptians had native words for metals, and borrowed others from the Semitic traders. The early Aryans had their own words for gold, silver, and copper, and in later times the Armenians borrowed words of Mongol origin, and the Greeks used both Akkadian and Phœnician terms. The Semitic peoples also borrowed Mongol words, through intercourse with the civilised Akkadians, who knew not only gold, silver, and copper, but early distinguished lead and tin, and had iron and bronze at a very early historic period. There is no word for any of these metals that runs through all the languages, nor are there any common names for weapons; for even the bow, though its name in each case comes from a root meaning "to bend," is separately named in each class of language. It has been observed in Aryan speech that the word for knife, coming from the root *SAK*, to cut, is connected with the word for stone which is found in the Latin *sarum*, whence Schrader supposes that the early knives were of flint. This root is common to the other linguistic classes, and in each there is a word for stone which may perhaps be connected. In Mongol speech we find *TAK* and *SIK*, "to cut"; and in Akkadian *TAK*, "a stone," which becomes *Tash* in modern Turkic dialects. We also have the word *Saṇ*, for "stone" in the same group. In Egyptian we find *Sekh*, "to cut," and *Sen*, "a stone." In Semitic speech we have *Shak*, "to divide," and *Suwān*, for a "flint stone." Possibly these indications may point to a common use of flint knives, such as we now find to have been known in Palestine and in Egypt as well as in Europe.

Turning to the question of the earliest animals named by man we find from the root *LA*, "to roar," the name of the lion which is the same in Semitic, in Aryan, and in Egyptian speech. It has been considered to be a loan word from the Semitic, but the root is apparently common to all the

languages, as well as the derivative. It occurs in the forms AR and RA, as well as LA and UL, meaning to "roar" or "howl," and from it are also formed the Akkadian *ur* for the dog and lion, the Semitic *Ari*, and the Mongol *ars-lan*, for "lion," the latter having a termination said to mean a "beast." The lion was widely spread over the west of Asia, and in Greece, but was unknown in colder countries. If it was known to the primitive Asiatics it would naturally be because their home was in Asia.\*

For the dog there is a widely spread term which comes from the root HAN or KAN, "to make a noise." It is the Latin *canis*, the Greek *κυν*, the Armenian *shoun*. In Egyptian we have the word *huns* for some kind of dog, and in Chinese *huen*, for "dog," which are not likely to be loan words. But in Mongol speech *kono*, is the "wolf," which becomes *komp* in Finnish. In Semitic languages the word *kelb*, for "dog," seems to be derived from another root which appears in the Aryan GALP, to "yelp." Such as it is the evidence points rather to the wild than to the domestic dog.

For the ox we have many terms which agree in being derived from roots meaning to "bellow," but it is remarkable that the Aryan *Taurus* is apparently the same as the Semitic *Thor*, and the Mongol *Shor*, which it is difficult to suppose was a loan word. The Egyptian *am*, for cattle, appears to be the Akkadian *am*, for the bull, and the Tartar words for the ox are derived from the root *ôn*, "to bellow." The word *car*, for a sheep, in Semitic speech recurs in the Greek *καρ*, and in the Finnic *Kari*; but the Mongol word is *Kos* or *Koch*. The former word seems to mean a "flock" or "herd," rather than a special animal, and may perhaps be compared with the Akkadian *Khar* and the Egyptian *Kher*, for "cattle." The Semitic name for the goat is *âz*, which resembles the Egyptian *at*, and the Aryan *aïs*, *aiv*, and *aja*. According to Delitzsch there is also an Akkadian word *âsi*, for an animal with horns, and another word *uz*, for "goat," is mentioned by Lenormant as belonging to the same language. The ass has also been supposed to bear the same name in Aryan, Semitic, and Tartar speech, the Latin *asinus*, Semitic *athon*, and Tartar *esek*, which has been compared with the Akkadian *anshu*. On the other

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\* I have not forgotten that the bones of men are found in the European caves with those of the lion, as well as of the mammoth, rhinoceros, bear, horse, and reindeer, but I doubt if man shared the cave with the lion, who had probably preceded him.

hand the names for the horse are very various, being, however, all derived from its speed. That the horse was tamed much later than the ass is too generally admitted to need any lengthy consideration.

Among birds the names for various kinds of crow are clearly taken from their croaking, and like that of the cuckoo (which is the same in Aryan and Semitic speech), they give no true linguistic evidence. It is remarkable that the duck seems perhaps to have the same name in languages widely separated, as in the Semitic *but*, the Egyptian *apt*, and the Chinese *aap*; but as a rule the names of birds are very different in different languages. Fishes also are variously named, sometimes from roots meaning "to swim"; but the Egyptian *Kha*, "fish," is the same as in Akkadian, and perhaps connected with the Chinese *qu*, and the widely spread Mongol and Finnic word *Kala* or *Kol*, and the Chinese *kwan* for a "large fish."

The names of common trees do not assist our enquiry, except that the Aryan and Semitic words for a "forest tree," seem to come from the root *AL*, "to rise up," or to be "high." The Aryan *dru*, for "wood," may perhaps compare with the Akkadian *tir*, for "wood" or "tree," which again may be the same as the Finnic *tel*, "wood," and the Hungarian *derek*, for a "tree trunk." Another word, the Semitic *etz*, occurs as the Greek *oços*, "a bough," and the Finnic *oks*, for "wood."

Other words which may be suspected of being borrowed are the names for "camel" and for "wine." It is usually held that the first is of Semitic origin. It occurs in Egyptian, and was adopted in Aryan speech, but the curious fact remains that it is not traceable to a Semitic root. In Mongol speech we have the words *Kam*, "to be bent or humped," and *el*, for "a beast," and it appears possible that the true origin is here found, as being the "beast with a hump." The camel is not solely an Arabian animal, since it has from a very early period existed in Central Asia and in Asia Minor. If it be a borrowed word it would seem more probably to be of Akkadian than of Semitic origin. The word for wine, on the other hand, is derived by Gesenius from a root meaning "to ferment," in Semitic speech. It appears to have been borrowed from the northern Semites by the Aryans, but it is not co-extensive with the whole range of languages under consideration.

The question of agriculture is one of high interest, and on which perhaps language throws light. There is a widely distributed word for seed from the root *SA*, "to sow,"

found in the Akkadian *se*, the Egyptian *su*, "seed," Mongolic *is*, and the Aryan *sa*, "to sow." In addition to such indication the old root KAR, "to enclose," forms words for an enclosed field in a great number of languages, as in the English *acre*, the Akkadian *agar*, the Finnic *aker*, the Turkic *akyer*, the Sanskrit *ajra*, the Greek *ἄγρος*. The Egyptian however is *har*, "a field," and the Semitic *car*, "a pasture." From the same root, perhaps, words for "town" appear to be formed as mentioned in the list appended. It appears not unnatural to suppose that some sort of enclosure is connected in these words, either with the sowing of seed or with the pasturing of cattle.

The question as to the seasons and the computation of time is of importance, but not easily elucidated. The word for "cold," from the root GAL, appears to be common to all the Asiatic languages, which would indicate an original climate at least not tropical. In the Aryan languages we have SNIGH as a root for words meaning "snow," and in Semitic speech we have *Sheley* (שֵׁלֵי), which might possibly be the same word. Again we have the Aryan PRUS, "to freeze" or be "frosty," and the Semitic *bírad* (בִּירַד), "to be cold," and "to hail." Both originally signify "to pour down," with reference to their atmospheric origin.

As regards time it is generally held that the measurement of the month by the moon is older than that of the year by the seasons. All Asiatic races have, from early times, used lunar months, and have called them from the moon. The name of the moon comes from a root to "shine," which is common to Aryan, Mongol, and Semitic speech; but the names for the sun are very various in the different early languages. The words for the "year" are equally variable, though there would seem to be some connection between the Semitic *Senneh*, or *Shanah*, and the Aryan *asan*, "harvest,"—whence the Latin *Annus*. "the year," according to Schrader. Another common root is SAR or SAL, whence various words for "year" are formed, such as the Zend *Saredah*, and the Turkic *Sal*. The meaning is apparently a "series," and the root occurs also in Semitic speech with the same signification, forming the name of the *Saros*, or Babylonian cycle.

Concerning dress it need only be remarked that the Aryan *su*, "to sew," is apparently the Finnic *soro*, "to

weave," and compares with a Semitic root *sawa*, "to join," or "make equal." The root WABH, "to weave," appears also to be common to Egyptian, Aryan, and Semitic speech, and an early clothing of something more than the skins of beasts thus seems indicated in the primitive period. That fire was known is certain, and that it was used in cooking food appears also to be indicated by the root BAK, occurring in all the various groups with the meaning of "cooking" food. As the root TOK seems possibly to be an original one with the meaning of "daubing," or "moulding," it is possible that language indicates at this early period the use of some kind of pottery. Even in the European prehistoric cemeteries rude pottery is found, and the earliest vessels before the discovery of metals must have been of clay.

The question of the dwellings in which these primitive Asiatics lived, is one of very considerable interest, and there is perhaps some reason to suppose that in addition to caves and tents such as are still used by Oriental peasants and nomads, there may also have been huts in the primitive period.

In Egyptian we have the words *ab* and *bu* for a house, which appear to answer to the Mongolic *oba*, softened in some dialects to *ova* and *ev*. The meaning appears to be "a dwelling." In Sanskrit *Bhu* means "to build," or "dwell," whence *Bhavana*, "a building" or "habitation." In Akkadian we find *VA*, and in the Cognate Susian dialect *UA* for "abode," and in Hebrew we have *Bua* (בוא), "to enter into a house," whence it is conceivable that the word *Beth*, "house," might originate. A second root connected with dwelling is found in the Assyrian *uru* or *alu* for a "town," which appears to be the same as the Akkadian *vuru*. It has

been compared with the Hebrew words *er* for "city" (ער), and *ohel*, "tent" (אהל), and with the Tartar *aul*, for a "camp," the R and L being indistinguishable. This again is found in the Hungarian *varos*, "town," and in the Aryan *var*, "enclosure," and perhaps the Sanskrit *alaya*, "tent," the root in each case meaning some walled or enclosed dwelling. The third ancient word also having the meaning of an enclosed place is the Egyptian *atra*, a "house," which recalls the Latin *atrium*. In Semitic speech we have *Eder*, for "a fold," and 'atar, "to surround." That such buildings or enclosures were roofed we might perhaps deduce from the

fact that the root DAG, "to cover" or "roof," is common to Aryan, Semitic, and Mongol speech.

On the question of family life all that can be said is that the roots PA and MA for "father" and "mother," are universally used in Asiatic speech, and recognisable also in Egyptian. For all other relationships the names are very various, though it is remarkable that the Hebrew *Akh*, "brother," is very like the Mongol *Aka*, "brother." This latter is connected with the common Mongolic word *og* for a "child" or "boy." The parental relationship meets us in the earliest languages; and such evidence tends at least to show that those who contend that marriage is one of the oldest of human institutions have more in their favour than those who suppose the "clan" to be older than the family.

The words used to denote deity are very various, the oldest perhaps being the Egyptian *Aas*, and the Mongolic *Es*, perhaps like the Aryan *Asura*, meaning a "living spirit." If Lenormant be right in supposing an Akkadian word *Elim*, for "Lord" or "exalted person," to exist, we might compare it with the Semitic *el* or *elohim*, "the mighty one," from a root common to all Asiatic languages. The evidence of language at least tends to show that the early believers did not regard their deities as being ghosts, since the word for ghost signifies in most cases what is "feeble,"—a shade or vapour—and not that which is strong and undying. In Egypt the "power" which was conceived to be the source of all life was hymned as early as 1400 B.C., and the name of Jehovah has the same significance that is to be remarked in the Aryan or Mongolic words for a deity. Many other titles, such as "the helper," the "life giver," the "eternal," or the "Lord," became specially used by different races, but the underlying conception is the same in all.

Briefly to sum up the possible results of our enquiry into the condition of the primitive Asiatics, we have noted that they appear to have lived in the pastoral condition, having perhaps a little corn and enclosures for their flocks. They possessed as yet no knowledge of metals, but hewed wood with flint instruments. They knew the ass, the ox, and the sheep, and possibly the camel and the dog, and were afraid of the lion. Their home was a cold or temperate climate, such as is best fitted for the development of the human race; and their simple arts of weaving, and moulding clay, enabled them to construct dwellings, either tents or huts covered

with roofs. The great discovery of fire was already made, but not applied to the melting of metals. The family already existed, and a belief in a spirit (or many spirits), not subject to the death which caused man to speak of himself as "mortal." It is a condition similar to that which scholars have independently concluded to have been the origin of the civilisation of each great stock, and similar to that of the prehistoric villages of Italy, as known by their remains. How long ago this primitive life was lived by the first ancestors of Asiatic races, we may judge by the fact that already at least as early as 2500 B.C., there were distinct civilisations and languages clearly divided into various groups; but of such life we have no evidence save that of speech, since writing was as yet unknown. Nevertheless there is some evidence that pictorial representation was already attempted, from which in time the great hieroglyphic systems were to arise. The word for "drawing" is common to Egyptian, Mongol and Semitic speech, in the root *SUR* or *SAR*, from which come the Mongol *Sor*, "to draw or write," the Egyptian *Serr*, and the Semitic *Sara*, "a drawing." The Aryans had a somewhat similar root *SKRI*, whence come words for sculpture and inscription. Nor must it be forgotten that the commonest signs denoting action are the same in all the hieroglyphic systems, and it is possible that even before the separation of Egyptians and Mongols some rude system existed for recording primitive events, by pictures such as the Red Indian still uses. The Aryans, however, did not apparently possess this art, and the Semitic peoples borrowed their written characters from the older Akkadians and Hittites, but even in 2500 B.C. (as shown by the statues of Tell Loh), there was already in Chaldea a system very fully organised, which has preserved for us the events of the days when the Akkadians ruled from the Persian Gulf to the Mediterranean, and cut down cedars in Lebanon.

In conclusion of the present paper it is proposed to say a few words as to the connection which exists between the civilisation of the Egyptians and of the Semitic race, in order to show more clearly that these people must have been in contact in a time subsequent to that of the original dispersion of the supposed primitive stock.

The grammatical connection between Egyptian and Semitic speech has been already mentioned, and the fact that some 220 words in the Egyptian dictionary are very closely similar to Semitic words of the same or similar meaning.

Out of this total it seems difficult in half the cases to suppose that we have to deal with loan words, because the terms are those belonging to very common objects or actions, and in many cases found also in Aryan and Mongolic speech. In about 80 cases they are bisyllabic words, agreeing in all the consonants with the Semitic. It is no doubt the case that when a Semitic population settled in the Delta, under the Shepherd Kings, a great many foreign words were added to the Egyptian vocabulary. Thus we have the Semitic *rasau*, "head," side by side with the old Egyptian word *ta*, for "head," and numerous nouns, such as the words for horse, chariot, iron, gold, well, enclosure, town, village, pool, chief, lord, noble, officer, acacia, honey, vineyard, tamarisk, cypress, unguent, butter, oil, pillar, wall, valley, river, bank, clay, son, daughter, and even for stick and salutation, appear to have been borrowed; while other terms seem to indicate possible borrowings from some people akin to the Akkadians. But there is another class of words—mainly verbs—which it is more difficult to suppose could have been so borrowed, and which connect the Semitic and Egyptian languages more closely than other Asiatic tongues.

Such are the words for think, hear, bind, envelop, embrace, walk, defend, lament, blow, pant, travel, kneel, work, avenge, understand, extend, glow, kindle, pull, shut, wall up, undress, and wander, also the nouns for water, lightning, finger, lip, and the words for hole, grief, and nakedness; one would scarcely expect such words to be borrowed unless the population was mainly Semitic, in which case the structure of the Egyptian language would have been no longer agglutinative. In some cases such nouns run into other languages as well, such as *Karn*, "a horn," which is Aryan as well as Semitic and Egyptian, or *au*, a "shore," which appears to be the Mongol *Yau*, and also occurs in Hebrew as *au* or *ai*.

The names of colours are very various in different languages, though their derivation is generally to be accounted for in the same way. Thus red is the colour of blood or of flame, white is the colour of light, black the colour of what is burnt, blue the colour of the sky, and yellow of the sun, while green and purple are little distinguished till later. Now, it is remarkable that the Egyptian and Semitic languages have in common words for white, black, and red, and that the Egyptian language also shows the derivation of these colour names from words meaning "light," "burning,"

and "blood." If we are to suppose that these words were borrowed, it would seem to follow that the Egyptians, who were so remarkable for their love of colour, had no native words to express black, white, or red. On the other hand these terms were widely used by Semitic peoples, since they occur in Arabic as well as in Hebrew. The Aryan words, and the Mongol names, for these colours, though of analogous origin, come from very different roots, and the names of colours give perhaps as good evidence of connection between languages as can be found. In this case we see that not only the simplest words, but others which denote a considerable advance in thought, serve to connect the Egyptian and the Semitic tongues.

Having thus briefly sketched out the results which seem to me to arise from a study of ancient languages, which has occupied many years of my spare time—results which presented themselves from time to time without at first suggesting any general principle, or appearing to me to be more than fortuitous resemblances—I have only to add, in asking for a merciful treatment of my imperfect attempts, that the present paper was not penned with any ulterior object, to support any particular theory as to the origin of mankind, but merely grew up out of the constant inspection of various grammars and dictionaries, undertaken for quite other purposes. I have been gradually led, however, to the belief that the evidence of language favours the supposition that Asiatic man as a whole was descended from a single original stock; and if what we hear stated as to other languages be provable, it would seem that from Asiatic man sprang the entire population of the modern world,

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#### COMPARATIVE LIST OF COMMON ROOTS.

N.B.—Akk., *Akkadian*. Egt., *Egyptian*. Ar., *Aryan*. Heb., *Hebrew*.  
 Ass., *Assyrian*. Arab., *Arabic*. Tk., *Turkic*. Fn., *Finnic-Ugric*.  
 Mon., *Mongol*. Ch., *Cantonese, dialect of Chinese*. Med., *Proto-Medic*. Sus., *Susian*.

#### CLASS I.—BREATHING.

1. AW. Egt., *au*, "to blow." Ar., *aw, wa*, "blow," "breathe"; *aw*, "desire." Ass., *au*, "wind." Arab., *hawa*, "breeze." Tk., *oi*, "fancy." Ch., *oi*, "love."

2. GA, GAN. Akkad., *gan*, *gîn*, "exist," "be"; *gun*, "grow." Egt. *kha*, *khe*, "to be born." Ar., *ga*, *gan*, "beget," "produce" *gi*, "live." Heb., *cun*. Ar., *can*, "exist." Tk., *kin*, "to do" *kil*, "to make." Ch., *chîng*, "to make." Mong., *ke*, *khe*, "make."
3. NAS. Egt., *nesai*, "ill." Ar., *nak*, *nās*, "perish." Heb., *nāsas* "sick."
4. AS. Egt., *us*, "create"; *aas*, "spirit." Ar., *as*, "breathe." Tk., *is* "blow"; *es*, "spirit."
5. ISH. Ak., *us*, "man." Ar., *ish*, "vigorous." Heb., *esh*, "man." Tk., *is*, "live."
6. SU. Ak., *sak*, "son." Ar., *su*, "generate." Finn., *sakko*, "offspring." Cf. SA, "man," Egt., Akk. (p. 49).
7. PU. Akk., *ba*, "create." Med., *Pe*, "make." Egt., *pu*, "to be"; *fua*, "child"; *fau*, "beget." Ar., *pu*, "beget"; *bhu*, "be," "dwell." Heb., *Pah*, "blow." Arab., *Fah*, "exhale." Tk., *bol*, "to be." Finn., *puu*, "child." Hung., *fiu*, "son."
8. PAR. Egt., *per*, "sprout"; *fer*, "pregnant." Ar., *par*, "produce"; *bhar*, "bear." Heb., *bar*, "son." Ass., *ablu*, "son." Heb., *Pârâh*, "to be fruitful," "to bear"; *Pârakh*, "sprouts," "offspring."
9. MA, MAK, MAGH. Sumer., *men*. Susian, *en*, "to be." Akk., *umma*, *ana*, "mother"; *makh*, "great." Egt., *mên*, "create." Aryan, *ma*, "measure"; *ma-tar*, "mother"; *mak*, "be able," "make"; *magh*, "great." Heb., *am*, "mother"; *'am*, "people"; *makh*, "fat," "noble." Arab., *mukh*, "fat," "marrow." Assyr., *makhkhu*, "great." Tk., *am*, *an*, "to be"; *am*, *an*, "mother"; *aim*, "people," "tribe"; *makh*, "high," "noble." Fn., *aim*, "family." Mon., *aimak*, *aiman*, "tribe." Ch., *mu*, "mother." Tunguse, *ama*, "father"; *eme*, "mother." Hung., *anya*, *mama*, "mother." Basque, *ama*, "mother."
10. DUR. Akk., *tur*, "remain." Egt., *tera*, "time." Ar., *dur*, "to endure, last." Heb., *dor*, "age," "generation"; *dur*, "abide," "dwell." Arab., *dar*, "dwelling." Tk., *tur*, "habitation," "tribe." Fn., *tar*, "abode"; *tur*, "tribe." Mongol., *turu*, "village."
11. LUD. Egt., *lut*, "flourish." Ar., *ludh*, "grow." Hebr., *Yâlad*, "to bring forth." Ass., *littu*, "offspring." Arab., *weled*, "a boy."

## CLASS II.—LIGHT AND FIRE.

12. AI, YA. Akkad., *i*, "bright"; *ya*, "glorious"; *ai*, "moon." Egt., *aak*, "moon." Heb., Arab., *ain*, "eye." Tk., *ai*, "moon." Ch., *yueh*, "moon."
13. AK. Egt., *ka*, "see." Ar., *ak*, "see." Heb., *ha*, "behold." Arab. *ha*, "behold." Tk., *ak*, "bright," "white."
14. KU. Akk., *ku*, "bright," "precious." Egt., *kha khu*, "shine." Ar., *kwi*, "shine." Heb., *cavah*, "burn." Arab., *cui*, "burn." Tk., *kui*, *kov*, "to burn," "gleam," "shine." Fn., *koi*, "bright." Ch., *kau*, "bright."

15. KAR, KIL.\* Akk., *khil*, "splendour." Egt., *hru*, "day." Ar., *kar*, *ghar*, *gla*, "burn," "shine," "glow." Heb., *khārāh kharr*, "burn." Arab., *harr*, "burn." Tk., *kar*, "to see," "shew"; *kara*, "burnt," "dry," "scorched," "black"; *kil*, "bright." Mong., *kara*, "to see," "to shine"; *gal*, "fire"; *hair*, "gleam"; *kalun*, "hot." Fn., *kar*, "burn"; *kaila*, "flame"; *kil*, "shine."
16. KAM KAN. Egt., *khemt*, "fire"; *kem*, "black." Ak., *gun*, "bright," "red." Heb., *kānā*, "very red." Arab., *kana*, "bright red." Heb., *khamah*, "warmth"; *khamn*, "hot"; *kham*, "black." Arab., *hammah*, "heat"; *hamn*, "to heat"; *hamn*, "black." Assy., *camu*, "burn." Tk., *kun*, *gun*, "brightness," "daylight," "sun," "fire." Ch., *kan*, "sun-rise."
17. KIZ. Ar., *kit*, "perceive." Heb., *khāzāh*, "behold." Turk., *köz*, *khiz*, "burn," "shine."
18. DI, DIK, TIN. Akk., *te*, "flame." Egt., *taï*, "burn." Ar., *dī*, "shine"; *idh*, "kindle"; *tith*, "burn." Egt., *teka*, "perceive." Ar., *dik*, "shew." Heb., *dik*, "perceive," "observe." Akk., *tīn*, "life." Turk., *tīn*, "life"; *dini*, "day"; *it ot*, "hot," "fire"; *tañ*, "light"; *dīn*, "brightness." Ch., *tīm*, "light."
19. IS, SI. Akk., *is*, "bright"; *si*, "see." Medic, *siya*, "see." Ar., *us*, "burn"; *was*, "shine"; *si*, "see"; *skaw*, "perceive." Egt., *sai*, "see." Heb., *esh*, "fire"; *shah*, "behold." Fin., *azo*, "see"; *si-n*, "eye." Hung., *se-m*, "eye." Siberian, *saen*, "eye." Turk., *yas*, *yis*, *is*, "light," "sunshine." Mordvin, *si*, "sun."
20. SUT, TUT. Egt., *sut*, "fire"; *tset*, "to roast." Ar., *sus*, "dry"; *tith*, "burn." Heb., *tsūth*, "burn"; *yatsath*, "to kindle." Ostiak, *tut*, "fire." Hung., *sut*, "bake."
21. AR, UR. Akk., *ur*, "burn," "light," "heat." Egt., *ra*, "sun"; *aar*, "eye." Ar., *ar*, *ur*, *war*, *wal*, "to burn," "to be hot." Heb., *ur*, "light"; *rah*, "see." Assy., *urra*, "light." Arab., *awar*, "to kindle"; *raa*, "to see." Turk., *al*, "to burn," "to be bright, red, golden." Akk., *el*, "bright," "pure"; *rī*, "bright." Turk., *or*, "to be bright," "hot"; *ver*, "red." Fn., *ver*; Hung., *veres*, "red."
22. RUK, LUK. Akk., *lakh*, "bright," "pure." Egt., *lekhu*, *rekhu*, "fire." Ar., *luk*, *rak*, "light," "shine"; *luna*, "moon." Heb., *lavakh*, "to shine." Arab., *lah*, "to shine." Heb., *yarakh*, "to shine"; *yerekh*, "the moon," "month."
23. SAR, SAL. Akk., *tsir*, "light." Egt., *tsar*, "to see." Ar., *swar*, "shine." Heb., *shārāh*, "to shine," "glitter." Tk., *zil*, *cil*, *yi*, "to shine," "to be warm." Mong., *sar*, *sel*, "clear"; *sara*, "gold." Fn., *sar*, "white"; *sel*, "shine."
24. MAR, MIL. Akk., *mīl*, "shine." Ar., *mar*, "shine" (cf. AR). Assy., *amar*, "see."

\* Ar., *gal*, Heb., *karr*, Turk., *kar* means "cold" (cf. KAR, "scrape," (Class VII). Probably GAL, "to fall," is connected and KAR, KUL, "to hurt," or "be evil," and "to die."

25. BA. Egt., *ba* "illumine." Ar., *bha*, "shine." Heb., *yapha*, "to shine."  
 26. BAK. Egt., *bak*, "see." Ar., *bhak*, "shine." Heb., *bāhak*, "to be white." Turk., *bak*, *bek*, "to see," "shew."  
 27. BAS. Egt., *aps*, "shine"; *abs*, "white." Ar., *bhas*, "shine." Heb. *bavatz*, "to be white"; *abetz*, "white." Arab., *baḍ*, "to be white"; *abiḍ*, "white." (Arab., *ḍ* = *ts*.)  
 28. BAR. Akk., *bar*, "bright." Egt., *berber*, "heat." Ar., *bhur*, "to burn." Heb., *bāhar*, "to shine"; *pavar*, "to be hot." Arab., *bakar*, "to shine"; *far*, "to be hot." Tk., *bor*, "white," "yellow." Akk., *bil*, "fire." Mong., *bulan*, "hot." (Ar. *bhalg*; Heb., *balag*, "shine.")\*

## CLASS III.—SOUND.

29. A. A cry of joy or grief in all languages.  
 30. O. A cry of grief. (See AW.)  
 31. KA, GU. Akk., *ka*, "mouth"; *gu*, "speak," "word." Egt., *ka*, "cry"; *ka*, "bull." Ar., *agh*, "speak"; *gu*, "bellow"; *kau*, "bull," "cow"; *kak*, "call." Heb., *akh*, "alas"; *akkkh*, "to cry." Ar., *ahah*, "to cry out." Heb., *ga'h*, "to bellow"; *goah*, "bellowing, lowing"; *cakhah*, "pant." Turk., *aikh*, *haikh*, "to call." Mon., *agui*, "mouth"; *ge*, "to say." Fin., *kak*, "to cackle," "call"; *kai*, "cry"; *ki*, "speech." Ch., *kiu*, "call."  
 32. KAN. Egt., *kmai*, "singer." Ar., *kan*, "sound," "sing," "bark." Heb., *kon*, *kin*, "sing." Arab., *kin*, "sing." Tk., *küng*, "to make a hollow sound." Ch., *cheung*, "to sing."  
 34. KAR, KAL. Akk., *kir*, "word." Ar., *kar*, *kal*, "call"; *klu*, "hear"; *krus*, "proclaim"; *skal*, "sing." Heb., *kārā*, "to cry," "call"; *kol*, "call," "voice"; *ceraz*, "proclaim." Arabic, *kerā*, "call"; *kal*, "say"; *karaz*, "preach." Assy., *karā*, "invoke." Tk., *kur*, "sound"; *kar*, "answer"; *khoi*, "hear." Mong., *kur*, "word"; *kele*, "speak." Fn., *kar*, "call"; *kal*, *kol*, *kil*, "noise"; *kur*, "ear." (Hung., *hires*, "a herald," perhaps a loan word.)  
 35. DHAN. Akk., *tun*, "strike." Egt., *ten*, "hear." Aryan, *dhan*, "strike"; *tan*, *stan*, "thunder." Heb., *uzzen*, "ear"; *azan*, "listen." Ass., *uznu*, "ear." Arab., *adhan*, "hear"; *aden idhen*, *izn*, "ear."  
 36. DHUP, DUM. Akk., *tum*, "dark." Egt., *tem*, "to shut." Ar., *dhup*, "to make dark, dim, deaf, and dumb." Heb., *dom*, "silent." Tk., *tum*, "dark."  
 37. SAK (cf. KAK). Ar., *sak*, "say." Heb., *shikh*, "to speak, sing." Tk., *äg*, *zig*, "call," "noise"; *sav*, "call"; *soz*, "words." Finnic, *sau*, "say."

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\* The Aryan, *bhram*; Heb., *baram*, "to burn," and the name of the *pramantha*, or "fire-stick," may tend to shew that BAR means fire by rubbing.

38. SUR. Ar., *swar*, "speak"; *sru*, "hear." Heb., *shir*, "song." Tk., *sur*, "speech," "word." Hung., *söl*, "speak," "call."
39. SIB. Egt., *seb*, "flute." Ar., *sib*, "whistle," "hiss"; *spu*, "spit." Heb., *tsáphaph*, "to twitter"; *tzephá*, "serpent." Arab., *shifán*, "snake."
40. AR, RA, UL, LA, RU. Akk., *ur*, "dog"; *ur-makh*, "great dog lion." Egt., *labu*, "lion." Ar., *ar*, *ra*, *ru*, "roar"; *ul*, "howl"; *leo*, "lion." Heb., *rád*, "to roar"; *ari*, "lion"; *labi*, "lion." Turk., *ars-lan*, "lion"; *al*, "savage"; *er*, "mighty." Mongol., *ule*, "howl." Basque, *or*, "dog."
41. RAS, RAK, RUG, LAK, LUG. Ar., "rage, roar, croak, speak, cry." Heb., *laish*, "lion"; *rag*, "stammer"; *rágá*, "terrify"; *rágash*, "rage"; *ruk*, "wind." Arab., *rág*, *ráj*, "tremble," *ruh*, "wind."
42. RABH, RAMBH. Ar., *rabh*, "rage," "roar"; *rambh*, "bellow." Heb., *rám*, "to make a noise," "to thunder."
43. NA (see MU). Med., *na*, "say." Egt., *nas*, "say." Ar., *nam*, "count." Heb., *nám*, "murmur." Arab., *nám*, "murmur." Tk., *oñg*, "bellow."
44. BHA, BHAN (cf. PU, Class I). Egt., *ba*, "sheep." Aryan, *bha*, "speak"; *bhal*, "resound"; *bhan*, "speak." Heb., *peh*, "mouth"; *pih*, "speak." Arab., *fi*, "mouth"; *fáh*, "speak." Tk., *bañk*, "voice."
45. BUK, MU, MUG. Akk., *mu*, "call," "name"; *am*, "bull." Egt., *am*, "cry"; *am*, "cattle." Aryan, *mu*, *mug*, "bellow," "low," "mutter"; *buk*, "bellow," "snort"; *bos*, "bull"; *bok*, "mouth"; *hum*, "hum"; *muk*, "mock." Heb., *mok*, "mock"; *hámáh*, "to hum." Arab., *mak*, "mock"; *hamham*, "mutter lament." Tk., *on oñg*, "groan," "bellow"; *enek*, "cow." Mong., *aner*, "sound"; *unñ*, "cow" (cf. AN AM); *buku*, "bull." Akkad., *am im*, "wind." Egt., *un*, "breathe," "exist." Aryan, *an*, "breathe." Heb., *ánan*, "lament"; *ána*, "speak"; *ánáh*, "mourn," "sing." Arab., *an*, "groan"; *ána*, "sing" (cf. MA, Class I, "to breathe").
46. MAR (cf. AR). Ar., *mar*, "speak." Heb., *ámar*, "to say," "command."

## CLASS IV.—MOVEMENT.

47. YA. Egt., *i*, "go"; Ar., *i ya*, "go" (see YAL).
48. AK. Akkad., *aka*, "raise." Egt., *akha*, "raise." Heb., *gáh*, "exalt." Tk., *akh*, *ag*, "high." Mong., *ike*, "great." Ch., *ki*, "upright"; *kue*, "elevate." Perhaps Ar., *ak*, "sharp"; *ki*, "sharpen."
50. GA, GAM. Akk., *ga*, "send"; *gi*, "return." Med., *ça*, "go." Egt., *ga*, "remove." Ar., *ga*, *gam*, "come"; *ak*, "haste," "drive." Heb., *aga*, "flee." Arab., *aga*, *aja*, "flee." Tk., *khom khim*, "move."
51. KAR, KAL, YAL. Ak., *khar khir*, "round" (cf. Class VII). Egt., *ker*, "circle." Ar., *gar*, "assemble"; *agar*, "collect"; *kar*, "to roll," "be round," "to run." Heb., *gor*, "turn aside"; *gálat*, "roll"; *khol*, "circle"; *cárar*, "to go round." Arab.,

- kâr*, "to turn." Akk., *kar*, "speed"; *khal*, "swift"; *gal*, "go"; *kurra*, "horse"; *kharran*, "road." Egt., *her*, "road." Ar. *kar*, *kal*, "move," "run." Heb., *agal*, "to skip"; *agal*, "to flow together." Arab., *agl*, "to hasten, hurry." Tk., *kir*, "pass by"; *kel*, "come near." Mong., *kar*, "go out"; *kara*, "gallop," "spring." Finn., *kal*, "go," "flow"; *kars*, "spring," "run"; *korna*, "road"; *kar*, "circle." Tk., *jel*, *sal*, "swift."
52. KUR. Akk., *kur*, "mountain"; *kar*, "fortress"; *khîr*, "strong," "enclosed"; *kal*, "strong"; *gal*, "to rise"; *gal*, "great." Ar., *kar*, *kal*, "rise," "top," "hill." Heb., *kariah*, "city"; *khelon*, "strong." Tk., *kar*, *kur*, *kol*, "might," "hand"; *kor gur*, "make strong," "fasten"; *kal*, "great." Fn., *kor*, "to be high"; *kul*, "hill"; *kal*, "high." Basque, *kora*, "high."
53. KUK. Akk., *kuga*, "high." Ar., *kuk*, "bend," "bow out." Tk., *koch*, "mighty"; *kokkuz*, "the breast." Fn., *kukka*, "long"; *kok*, "high," "proud," "bent." Hence, Egt., *kes*; Heb., *kush*; Arab., *kos*, "the bow"; Gr., *γᾰῡρος*, "bent"; and Tk., *kueuk*, "the vault of heaven," whence "blue." Akk., *kuk*, "blue."
54. KAS. Akkad., *kazinna*, "hare." Egt., *khes*, "speed"; *hes*, "go." Ar., *kas*, "speed"; *kazen*, "hare"; perhaps also *kvas*, "pant." Heb., *khâsâh*, "flee"; *khosh*, *khish*, "to haste." Arab., *khâsh*, "flee"; *hazz*, "speed." Tk., *kec*, "to go forward." Fn., *kos*, "to run."
55. KAD. Akkad., *gid*, "go," "distant." Egt., *hat*, "hasten." Ar., *kad*, "go," "fall." Heb., *khâtâh*, "stray," "stumble." Ar., *khata*, "stray." Tk., *ket*, "to go," "go away."
56. GID. Ar., *ghid*, "skip"; *kid*, a "kid." Heb., *gedi*, "kid." Ar., *jedi*, "kid."
57. DU. Ak., *du*, "go." Egt., *tu*, "go." Ar., *du*, "go." Heb., *tâah*, "to wander"; *âlah*, "to go by." Arab., *taghi*, *tîi*, "wander"; *âda*, "go forth," "attack." Tk., *ot*, "to stride."
58. TAK (see LIK). Akk., *tak*, "to fail." Ar., *tak*, "to flow," "melt," "pine." Heb., *dâg*, "to be afraid." Tk., *takh*, "to slide," "be shallow."
59. TAR, TAL. Akk., *tal*, "pass," "rise"; *tur*, "enter." Egt., *ter*, "the end"; *tara*, "door." Ar., *tar*, "stretch," "pass over," "reach," "enter" (hence "door"). Heb., *thor*, "travel"; *terâ*, "gate." Arab., *tar*, "travel"; *turâh*, "gate." Ar., *tal* *tol*, "rise," "fall," "balance." Heb., *tâlâl*, "rise"; *tell*, "heap"; *tâlâh*, "hang"; *tâlâh*, "extend"; *dâlâh*, "hang down." Arab., *tall*, "rise"; *tala*, "hang"; *dela*, "hang down" (hence *dela*, "bucket"); *tâlâh*, "ascend." Egt., *ter*, "to drive." Ar., *dra*, *dram*, "run." Tk., *tal*, "go down"; *tal*, *sal*, "toss," "hang"; *tur*, "to be high"; *ter*, "to be swift" (derivative, Akkad., *dara darag*, "deer." Heb., *dalag*, "to spring." Mong., *turgun*, "swift"). Fn., *tar*, "high." Mong., *darga*, "chief."
60. TARP, DRAP. Egt., *terf*, "dance." Ar., *tarp*, "dance." Ar., *drap*, "run," "flow," "drip," "droop." Heb., *dâlaph*, "drop," "drip." Ar., *delef*, "drip." Heb., *talaph*, "to perish." Ar., *talaf*, "to perish."
61. TOP. Egt., *tep*, "top." Ar., *topa*, "top." Heb., *tebar*, "to be

- lofty." Tk., *tob*, "hump"; *tepe*, "hill." Fin., *tup*, "high"; *tüppüra*, "hill." Mong., *dobo*, "hill" (*cf.* TAB, Class VI).
62. SAD. Akk., *sud*, "extend." Egt., *sati*, "go out." Ar., *sad*, "travel." Heb., *tsad*, "step," "go," "mount up" (hence Egt., *sati*, "mountain country." Assy., *sadu*, "mountain." Arab., *sādān*, *sidd*, "mountain"). Tk., *sat*, "to lounge." *Cf.* SAT, STA. Egt., *set*, "establish"; *set*, "a bank." Ar., *sat*, "fill up"; *sta*, "stop," "stand," "set"; *sud*, "sit." Heb., *sit*, "place," "erect." Arab., *sidd*, "bank."
63. SA. Akkad., *se*, "seed." Egt., *su*, "seed." Ar., *sa*, "to strew seed." Turk., *as*, "seed." Mong., *sasa*, "to sow" (*cf.* SU, Class I). Perhaps Heb., *yatzā*, "to spread out."
64. SU. Akk., *sa*, *Medic*, *ça*, "go." Egt., *tse*, "go"; *san*, "drink"; *shu*, "wind." Ar., *swa*, "to sway." Heb., *sāh*, "to run"; *yatzā*, "to issue." Arabic, *shāi*, "to run," "rush" (of water and wind). Tk., *su*, "flow," "river," "water." Mong., *oso*, "water." Ch., *shui*, "water."
65. IS. Egt., *as*, "speed." Ar., *is*, "speed." Heb., *auts*, "to hasten." Tk., *as*, *es*, "to stride."
66. SAG. Egt., *skhen*, "to settle." Ar., *sag sank*, "to sink." Heb., *sacan*, "to settle." Arab., *sacan*, "settle."
67. SUK. Akk., *suk*, "swamp." Egt., *sekh*, "go." Ar., *sug*, "flow"; *swag*, *skag*, "sway," "shake." Heb., *sharak*, "run"; *shok*, "leg." Arab., *sak*, "leg." Mongol., *sokoī*, "swamp." Ch., *tsuuk*, "foot."
68. SUR. Akk., *sur*, "flow." Egt., *sert*, "flood"; *sura*, "drink." Ar., *sar*, *sru*, "flow"; *sual*, "swell." Heb., *shavar*, "to go." Arab., *seil*, "a stream." Fn., *zer*, "to rain." Tk., *sil sal*, "wind," "rain," "winter." Deriv., SARB. Aryan, *swarbh*, "to drink." Heb., *sāraph*, "to drink." Arab., *sharab*, "to drink."
69. SUB. Akkad., *sub*, "flow." Egt., *sabu*, "drink"; *sefi*, "damp." Ar., *swap*, "to move swiftly"; *swam*, "swim." Heb., *tsavaph*, "to overflow," "to make swim." Tk., *sub*, "flow." Ch., *shaap*, "damp." Fn., *sup*, "to drown."
70. SAB. Akk., *sibir*, "gathering," "harvest"; *sub*, "to collect." Egt., *sap*, "gather." Ar., *swip*, "to sweep." Heb., *āsaph*, "to collect." Fn., *sap*, "to gather."
71. SALP. Ar., *sarp salp*, "slip." Heb., *zalaph*, *dalaph*, "slip," "drop" (*cf.* TAL).
72. RA. Akk., *ru*, "go." Egt., *rer*, "go." Ar., *ra*, "go." Sansk., *ru*, "go." Arab., *ruh*, "go." Turk., *ora*, "foot." Mong., *ire*, "come"; *ula*, "foot."
73. AR, AL.\* Akkad., *il*, "rise." Egt., *ar*, "go up." Ar., *ar*, *al*, "go," "go up." Heb., *al*, "high"; *el*, "strong." Arab., *ālī*,

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\* Hence probably Akk., *er*, "man"; Armen., *ayr*, "man"; Ar., *arya*, "man," "noble"; Tk., *er*, "man"; meaning "erect," "tall," "strong," i.e., full grown man.

- "high." Tk., *al*, *ol*, "high," "great"; *ar*, "strong"; *or*, "high." Mong., *alut*, "over."
74. RI, LI, LIK. Akk., *raa*, "irrigate"; *ari*, "flow." Egt., *aru*, "river." Ar., *ri*, *li*, "go," "flow"; *lik*, "pour," "melt." Heb., *yar*, "river"; *ruh*, "drink"; *ruk*, "pour"; *lakh*, "moist." Tk., *in*, "flow." Mong., *ilu*, "overflow." Fn., *yur*, "flood." Ch., *lau*, "flow."
75. RAS. Egt., *rsau*, "head." Sk., *rij*, "stretch." Heb., *rosh*. Arab., *rās*, "head." (Akkad., *rikh*, "to rise.")
76. RAG. Akk., *rakh*, "walk." Egt., *rehen*, "move." Ar., *rag*, *rangh*, "run." Heb., *arakh*, "go." Arab., *ruh*, "go." Heb., *yalak*, "to walk."
77. RAD. Akk., *radu*, "go." Ar., *radh*, *ladh*, "to quit." Heb., *yārad*, "to go down"; *ravad*, "to wander." Arab., *rād*, "to ramble." (Aryan, *lad*, "to let go.")
78. LAG. Ar., *lak*, "depress"; *lagh*, "lie down"; *lag*, "lax"; *lik*, *rik*, "to go away," "leave." Egt., *lakai*, "soft." Heb., *lag*, "cavity." Arab., *lagg*, *lajj*, "to be deep" (of water).
79. LIG (cf. LIK). Ar., *ligh*, "lick." Heb., *lākak*, "to lick." Arab., *laklak*, "tongue." (Akk., *lakh*, "pure." Egt., *lekh*, "wash.")
80. LAB. Aryan, *lab*, "droop." Heb., *rāph*, "to drop water." Arab., *rāf*, "shed." Ar., *lap*, "to lap." Heb., *lāhab*, "to lick" (cf. lambent flame); *lab*, "to thirst." Arab., *lahab*, "to burn."
81. NA. Akkad., *na*, "go forward." Egt., *na*, "go." Ar., *nas*, "go to"; *nak*, "reach." Heb., *nāgā*, "reach to," "come to."
82. NAB.\* Egt., *nef*, "wind"; *nebi*, "lord"; *nebab*, "inundate." Ar., *nabh*, "to swell" (hence "clouds"), "to burst." Heb., *nib*, "sprout"; *nābā*, "to swell up," "bubble"; *nābā*, "gush out." Arab., *nebā*, "a spring." (Hence perhaps also *anf*, "the nose." Cf. Latin, *nupta*, "made pregnant." Heb., *nabi*, "inspired.") Ch., *nup*, "grain." (Egt., *nefr*, "prosperous"; *nepra*, "corn"?)
83. PA, PAD. Medic, *putta*, "to go." Egt., *bu*, "go"; *peh*, "arrive"; *pet*, "foot"; *bes*, "go." Ar., *pad*, "go." Heb., *bāz*, "to be swift"; *abad*, "to wander." Arab., *bāid*, "far." Tk., *pa*, "foot"; *but*, "foot." Akk., *pu*, "long." Egt., *buai*, "height." Heb., *bua*, "enter." Tk., *boi*, "long."
84. PAT. Egt., *pet*, *ptah*, "spread," "open"; *peses petes*, "extend." Ar., *pat*, "spread," "flat." Heb., *bāt*, "trample," "tread." (Akk., *bat*, "to die.") Egt., *pet*, "to fly"; *betes*, "to fall." Ar., *pat*, "fly," "fall." Heb., *abad*, "perish." Arab., *bād*, "perish." Heb., *pāsas*, "to end," "pass." Tk., *bat*, "to go down." Ch., *foot*, "broad."
85. PAR. Med., *pori*, "go." Ar., *par*, "travel." Heb., *ābar*, "to mount up." Tk., *bar*, "walk."

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\* The Egt. *nub*, "gold," compares with the Akkad., *nap*, "light," and Mongol., *nup*, "sun," as meaning "yellow."

86. PAL, PLU. Akk., *bela*, "completion"; *bur*, "river." Ar., *ṣal*, "fill up"; *pru*, *plu*, "jump," "fly," "flow," "swim"; *bhla*, "flow," "blow." Heb., *pārā*, "to run"; *āphal*, "to swell." Tk., *bar*, "completion"; *ber*, "pour"; *bar*, "cover"; *ber*, "rain." Mong., *buri*, "all." Heb., *bālāl*, "to pour." Arab., *bel*, "wet."
87. BAG. Egt., *beka*, "fly"; *beha*, "flee." Ar., *bhag*, "to flee"; *bhug*, "to wave about." Heb., *bavae*, "to turn about"; *pavak*, "to move to and fro"; *bakak*, "to pour out."
88. MU. Egt., *mu*, "water"; *iūma*, "the sea." Ar., *mu*, "move"; *mi*, "go." Heb., *mī*, *mu*, "water"; *yam*, "the sea." Arab., *ma*, *moia*, "water." Heb., *māh*, "flow down."
89. UD. Ar., *ud*, "to be wet" (cf. *wal*, "to roll.") Heb., *ad*, "vapour"; *avad*, "to turn." Arab., *ad*, "to bend" (cf. *aval*, "to roll"; *dval*, "to turn away"). Cf. AW, Class I; WA, WAD, Class VI.
90. UP. Ar., *wip*, "to vibrate." Heb., *dūph*, "to fly."
91. MAR, MUT. Egt., *mer*, *met*, "die." Ar., *mar*, *mal*, "dissolve," "crumble," "melt," "die." Heb., *maveth*, "death." Arab., *maut*, "death."

## CLASS V.—SWALLOWING.

92. GA. Ak., *ka*, "mouth"; *gu*, "door"; *ku*, "eat"; *ge*, "abyss." Egt., *hu*, "food"; *kha*, "corpse." Ar., *gha*, "gape." Heb., *gavā*, "expire"; *gau*, "inside." Tk., *ag*, "open," *agui*, "hole." Ch., *hav*, "mouth."
93. AG. Ar., *ang*, "to choke." Heb., *ānak*, "to compress"; *koa*, "vomit." Ch., *au*, "vomit"; *ang*, "press."
94. GAB, KUB. Ak., *gab*, "open." Egt., *kab*, "vault." Heb., *gob*, "pit"; *gavaph*, "to be hollow." Arab., *gab*, *jab*, "hollow." Heb., *kābab*, "to be hollow," "vaulted." Arab., *kabu*, "vault." Tk., *kab*, *kub*, "hollow." Fin., *kap*, "valley," "hollow."
95. GAR. Akk., *gar*, "food." Ar., *gar*, "swallow." Heb., *ācal*, "eat." Arab., *acal*, "eat." Mong., *karu*, "greedy."
96. AD, AS. Ar., *ad*, "eat." Tk., *it*, *as*, *is*, "eat."
- 96A. DA, DAD. Egt., *tet*, "suckle." Ar., *dha*, "suck," *Θηλή*, *dud*, "teat." Heb., *dud*, "breast."
97. PA, PI. Ak., *abba*, "water"; *bi*, "drink." Egt., *af*, "food." Heb., *pek*, "mouth" (cf. BHA, Class III). Ar., *pa*, "feed"; *pi*, "drink"; *ap*, "water." Tk., *ab*, "water."
98. PAS. Egt., *pes*, "bite." Ar., *bhag*, "eat." Tk., *bis*, "cut" (see PIS, Class VII). Cf. Ital., *bocca*, "mouth."

## CLASS VI.—TOUCHING, HITTING.

99. AD, AS. Egt., *ut*, "fling"; *aas*, "javelin." Aryan, *as*, "throw." Tk., *at*, *it*, "throw," "sling" (cf. IS, "speed," Class IV).
100. TA. Akk., *ta*, "drive"; *de*, "beat." Egt., *ta*, "beat." Ch., *ta*, "beat."

- 100A. TAK. Akk., *dugga*, "make." Egt., *takh*, "beat"; *tekes*, "cut." Ar., *tak*, *taks*, "hew," "make," "produce." Heb., *dākak*, "break in pieces." Arab., *dakk*, "pound." Tk., *takh*, *tik*, "cut." Fn., *tak*, "strike," "make." (Ar., *dak*, "bite," is probably connected.)
101. DA. Akk., *tī*, "take." Egt., *tu*, "give." Ar., *da*, "give." Heb., *yad*, "hand." Ass., *īdu*, "lay." Mong., *te*, "lay."
102. DAK. Akk., *tuk*, "have." Ar., *dak*, "hold." Tk., *tag*, "touch."
103. TAR. Akk., *tar*, "split." Egt., *ter*, "split," "beat." Ar., *tar*, "penetrate." Tk., *tir*, "break." Mong., *tar*, "cut." Fn., *tar*, "divide."
104. DAN (see DHAN, Class III). Akk., *tun*, "strike." Egt., *athen*, "strike"; *aten*, "pierce"; *ten*, "cut." Ar., *tan*, "cut." Heb., *azen*, "weapon"; *ṭān*, "pierce."
105. TAM. Egt., *tem*, "cut." Ar., *tam*, "cut," "gnaw." Heb., *tām*, "eat." Fn., *tam*, "stamp."
106. TEP. Egt., *tep*, "drum." Greek, *τύπος*, "blow." Sansk., *tup*, "hurt." Heb., *taphaph*, "strike"; *toph*, "drum." Arab., *daff*, "strike." Tk., *tep*, "kick." Fn., *tap*, "strike."
107. SAP. Egt., *aspu*, "cut." Sk., *shap*, "grind." Heb., *šāph*, "divide." Tk., *sap*, "hew." Mong., *saba*, "beat." Fn., *sap*, "hew."
108. SAR, SKAR. Egt., *sker*, "cut"; *serr*, "engrave." (Akk., *sar*, "write.") Ar., *skar*, *skri*, "shear," "write." Heb., *shār*, "cleave." Arab., *sura*, "a drawing." M., *sor*; Tk., *ser*, "to write or draw." Fn., *sor sal*, "split." (Aryan, *skarp skarbh*, "cut." Heb., *shālub*, "to notch.")
109. RAP. Egt., *arf*, "seize." Ar., *rap*, "snatch"; *riṭ*, "rend." Heb., *ārāph*, "seize."
110. RUP. Ar., *rup*, "break." Heb., *ruph*, "pound."
111. RIK. Egt., *rega*, "separate." Ar., *rik*, "tear"; *rug*, "rend." Heb., *rākak*, "separate," "spread."
112. LIP. Ar., *lip*, "adhere." Assyr., *libu*, "cleave to."
114. KAR. Akk., *gir*, "split"; *kur*, "to separate." Egt., *kher*, "enemy"; *herpu*, "sword." Ar., *krit*, "cut"; *gar*, "grind"; *kar*, "destroy"; *ghar*, "grasp" (cf. Medic, *kar*, "hand"). Heb., *garar*, "scrape"; *cur*, "dig." Arab., *kur*, "dig"; *jur*, "hollowed out." Tk., *kir kil*, "break." Mong., *kiro*, "saw"; *kure*, "file."
115. KAT, KAS. Akk., *kut*, "cut"; *khas*, "split." Egt., *het*, "sword." Ar., *ghas*, "strike," "wound." Sk., *chid*, "slay." Heb., *gadad*, "cut"; *kadad*, "cleave." Arab., *jedd* and *kadd*. Tk., *kes*, "cut." Mong., *kadur*, "sickle"; *kazi*, "bite." Fin., *kat*, "cut"; *kas*, "divide." Ch., *kat*, "pierce"; *koht*, "cut"; *kwut*, "dig."
116. KAT. Akk., *kat*, "hand." Egt., *khet*, "to close." Ar., *kat*, "close"; *ghad*, "grasp." Heb., *akhad*, "take"; *khatah*, "seize." Arab., *akhadh*, "take." Tk., *kat*, "join." Fn., *kat*, "fasten." (N.B., Mongol, *gar*, "hand," see preceding root.)
117. KAN. Ar., *ghan*, "strike." Heb., *kin*, "strike." Tk., *sun*, "hew."
118. KAP. Akk., *gub*, "fix," "hand." Egt., *khafa*, "seize"; *kheb*, "fist."

- Ar., *kap*, "hold." Heb., *caph*, "hollow of hand." Arab., *kaff*. Tk., *kap*, "grip." Chin., *chup*, "hold"; *kup*, "cover."
119. PAR. Ar., *par*, "give." Heb., *phâl*; Arab., *fâl*, "make." Tk., *ber*, "give."
120. BAR, BAL. Akk., *bar*, "cut"; *pal*, "cleave." Egt., *berk*, "open." Ar., *bhar*, "cut," "bore"; *bhrag*, "break." Heb., *bar*, *par*, "dig," "bore"; *parakh*, "burst"; *parak*, "break." Tk., *bal*, "split." Mong., *balta*, "axe." Fn., *pel*, "divide"; *pir*, "split."
121. BAD. Akk., *bad*, "open." Egt., *pit*, *fut*, "divide." Ar., *bhid*, "cleave," "bite." Heb., *badad*, "divide"; *padad*, "cut up." Arab., *badd*, *fadd*, "separate." Tk., *bit*, "cut."

## CLASS VII.—WORK.

122. WA, WI. Ar., *wa*, *wi*, "wind," "bend," "bind." Heb., *avah*, "inflect." Arab., *awa*. (Ch., *wai*, "fence" ?)
123. WAR. Egt., "uar," "cord." Ar., *war*, *wal*, "wind," "roll." Heb., *âuel*, "distort." Arab., *âal*, "turn." Tk., *al*, "grip"; *el*, "hand"; *or*, "rope."
124. WAB. Ar., *wabh*, "weave." Heb., *âub*, "wrap." Tk., *ip*, "bind."
125. AK ANK. Ar., *ak ank*, "bend"; *ag ang*, "choke" (cf. AG, Class V). Egt., *ki*, "choke"; *ag*, "cord." Heb., *âug*; Arab., *âuj*, "bend." Tk., *eg*, "bend." Ch., *hau*, "hook."
126. KAK KUK (see KUK, Class IV). Ar., *kak*, "bend," "surround." Heb., *khagag*; Arab., *haji*, "to go round." Fn., *kak*, "bowed."
127. KAR. Akk., *gar*, "make" (see KAR, Class VI). Egt., *ger*, *kher*, "have." Ar., *kar*, "make," "act," "work," "produce"; *ghar*, "seize." Heb., *câra*; Arab., *cara*, "dig." Tk., *kar*, "hand," "power"; *kil*, "to do," "make." Ar., *karp*, Heb., *garaph* "grab."
128. KAT. Akk., *kit*, "gather," "shut." Egt., *huta*, "cover." Ar., *kat*, "cover," "gather." Heb., *akhad*, "unite"; *casah*, "cover." Tk., *kat*, "fasten." Fn., *kat*, *kant*, "cover" (hence "house," as in Aryan); *kat*, "hide."
129. KAS. Ar., *gas*, "heap up." Heb., *kashash*; Arab., *kashsh*, "gather." Tk., *kot kos*, "heap up." (Egt., *hesb*; Heb., *khashab*; Arab., *hasab*, "to add up," "calculate," "think.")
130. KAM. Ak., *gam*, "bend," "subdue." Egt., *hams*, "bend." Ar., *kam*, "bend" (Heb., *kâmâh*; Arab., *kama*, "to collect" ?). Tk., *kom*, "round," "humpy." Ch., *kuung*, "bow."
131. KAP, KUP. Akkad., *gab*, "breast." Egt., *kab khab*, "bent," "crooked." Ar., *kap kamp*, "bend," "vibrate"; *kubh*, "bend," "vibrate," "swell up." Heb., *gabâ*, "swell up round"; *kabab*, "round and hollow"; *guph*, "hollow" (Arab., *jaba*, *kabb*, and *jâf*). Tk., *kob*, *kab*, *kou*, "hollow." (Cf. Aryan, *ku*, "hollow." Heb., *gu*; Arab., *ju*, "interior.") Finn., *kap*, "hill," "valley," "sphere." Mong., *gube*, "hill" (cf. GAB, Class V, "to gape.")

132. DAG, STAK. Egt., *steka*, "to cover." Ar., *tag*, *stag*, "to roof or thatch." Heb., *degah*, Arab., *daja*, "to cover." Tk., *tag*, "cover"; *tuk*, "stretch," "sew."
133. DAG, TOG. Akk., *dag*, "to make." Egt., *takh*, "beat." Ar., *dhigh*, "mould," "form," "knead," "smear." Heb., *tavakh*, "daub." Arab., *takh*, "smear." Tk., *tog*, "smooth" (Akk., *tag*, "turn." Ar., *tak*, "weave").
134. TU, DU. Akk., *du*, "make." Ar., *du*, "toil." Heb., *tuah*, "to spin" (Arab., *tui*). Fn., *tu*, "to make."
135. TA, TAN. Ar., *ta*, *tan*, "stretch." Heb., *tana*, "to weave." Tk., *ton*, "to cover." Ch., *taai*, "band."
136. TAK, TANG. Akk., *tuk*, "to have." Ar., *dak*, *tang*, "take hold." Tk., *tak*, "touch." Fin., *tan*, "hand."
137. TAR (see Class VI). Akk., *til*, "to complete"; *tar*, "fix." Ar., *dar*, "to do," "effect"; *tar*, "to turn," "rub," "bore" (Ar., *drap*, "beat." Heb., *darab*, Arab., *darab*, "beat"). Akk., *tur*, "settle," "abide." Egt., *atr*, "stop," "prevent." Ar., *dhar*, "hold," "maintain." Heb., *davar*. Arab., *dur*, "remain," "abide." Tk., *tur*, "dwell." Fin., *tar*, "abide." Mong., *turu*, "village."
138. DAM, TAM. Akk., *dim*, "cord"; *tum*, "fear." Ar., *dam*, "tame;" *daman*, "rope"; *tam*, "fear," "choke"; *tank*, "squeeze." Heb., *atam*, "shut," "stop." Tk., *tam*, "to seal."
139. DAM. Akk., *d̄im*, "create" (Egt., *tem*, "building"?). Ar., *dam*, "to build." Heb., *tamam*, Arab., *thumm*, "to complete." Tk., *tam*, "to build."
140. TAB. Akk., *tab*, "to form," "establish." Ar., *stap*, *stabh*, "to make firm." Heb., *dabab*; Arab., *dabb*, "to tread." Tk., *tab*, "basis." Ch., *taap*, "to tread."
141. SAR. Akk., *sar*, "period." Egt., *tsar*, "calculation." Ar., *sar*, *swar*, "to arrange in order," "to string." Heb., *sárah*, "to put in a row"; *asher*, "straight." Arab., *sar*, "to set in order." (Egt., *sar*, "chief." Heb., *sar*. Ass., *saru*, Akk., *sar*? "chief," "arranger.") Zend, *çareda*, "year." Tk., *sal*, "year." Medic, *karata*, "time." Tk., *ser*, "to arrange," "rule."
142. SAD, SAT (See SAD, Class IV). Egt., *set*, "establish"; *saat*, "throne." Aryan, *sad*, "sit"; *sta*, "stand"; *sat*, "full." Heb., *sād*, "prop up"; *shadad*, "strengthen." Arab., *shidd*, "pull"; *shadid*, "strong." Tk., *süz*, "to stand still."
143. SAM (cf. DHUP, Class III). Egt., *sani*, "dark"; *sem*, "butter," "grease." Ar., *sma*, "to smear." Ass., *sama*, "dark." Heb., *shaman*, "fat." Arab., *semen*, "butter." Fin., *ham*, *sam*, "dark," "cloud." The idea is "to cover or smear over." Hence, Heb., *shema*, *shemin*, "the sky," "the clouds."
144. SU. Akk., *su*, "tie." Ar., *su siw*, "sew." Heb., *shava*, "to make level, equal, or fit," "to put." Arab., *sawa*, "equally joined." Fn., *sozo*, "to weave."
145. NAG. Egt., *nuh*, "cord." Ar., *nagh*, "to bind."

146. RA, AR, LU. Akk., *ra*, "take"; *ru*, "make," "found"; *ur*, "foundation"; *lu*, "yoke." Egt., *ra ar*, "make"; *ar*, "foundation"; *lai*, "bend." Ar., *ar*, "to fit," "to acquire"; *ra*, "to fit"; *lu*, "to acquire." Heb., *ālāl*, "to join," "bind"; *arah*, "take," "pluck," "collect," "gather." Arab., *ghal*, "to put in," "to yoke" (*gh* in Arabic = *ā* in Hebrew, always). Heb., *lavah*, "to be joined." Tk., *al*, "hold"; *el*, "bind"; *or*, "cord." (Heb., *er*. Assy., *uru*, "city," *i.e.*, "foundation.") Ch., *lan*, "keep"; *laam*, "rope."
147. AP (*cf.* WAB). Akk., *pa*, "fibre." Egt., *abti*, "net," "spin"; *naf*, "squeeze." Ar., *ap*, "bind," "hold," "work." Heb., *aphaph*, "to surround." Tk., *ip*, "gather," "bind," "string." Ch., *pau*, "bundle"; *ipi*, "clothes."
148. PAK. Ar., *pak*, "fix." "bind." Heb., *aphak*, "hold fast." Tk., *bag*, "bind." (Hence Medic, *pikti*, "to aid." Tk., *pokti*, "to strengthen," "support.")
149. PAS. Egt., *pes*, "cook." Ar., *pak*, "cook." Heb., *aphah*. Arab., *afi*, "cook." Tk., *bis*, "cook."
150. PIS, PIK, PUK. Egt., *fekan*, "cut"; *basa*, "cut." Ar., *pik*, "prick"; "cut," *puk*, "pierce," "prick," "strike." Heb., *bakāh*, "cleave"; *pagāh*, "strike." Tk., *bis*, "cut" (*cf.* BAD, Class VI).
151. PARD. Ar., *pard*, "explode." Heb., *parad*, "to crack," "expand." Arab., *fered*, "crack."
152. BUG. Akk., *bav*, "bow." Ar., *bhugh*, "to bow," "bend." Heb., *bavac*, "turn," "roll"; *pavak*, "to move to and fro"; *pavac*, "to wave" (hence *fucus*, "seaweed." Heb., *pūc*).
153. BAD, BAND. Akk., *bat*, "a walled town." Egt., *bant*, "to bind"; *pet*, "bow." Ar., *bhad*, *bhid*, *bhand*, "to bind"; *banda*, "fortress" (Sk., *pid*, "to hinder, vex." Heb., *peed*, "calamity.") Heb., *abād*, "to incline"?; *bada*, "to fashion," "mould." Tk., *bot*, "enclosure," "fortress." (The radical meaning is bend and bind.)
154. MAR. Ar., *mar*, "to grind" (*cf.* MAR, Class IV), "to rub"; *mare*, "the sea." Heb., *marar*, "to be bitter" (*i.e.*, "to sting"); *malakh*, "to be salt." (Ar., *mark*, *malg*, "to rub." Heb., *marah*, "to rub.") Ar., *mar*, "to make dirty." Heb., *māhal*, "to spoil."

## CLASS VIII.—LOVE, DESIRE, THOUGHT.

155. AW (*see* AW, Class I). Ar., *aw*, "desire." Tk., *oi*, "fancy." Ch., *oi*, "love."
156. WAN (*cf.* AN, "to breathe," pp. 37-40). Ar., *wan*, "honor," "success," "desire" (hence *Venus*). Heb., *aun*, "ability," "power," "wealth." Tk., *on*, "power" (*cf.* Akk., *un en*, "lord." Assy., *enu*, "lord.") Ch., *uen*, "desire."
157. KAM. Akk., *gaam*, "grace," "kindness" (*cf.* KAM, "bend," Class VII). Egt., *khemt*, "desire," "inclination." Ar., *kam*, "love." Heb., *camah*, "to long." Arab., *jamā*, "to embrace." Fn., *yem*, "good."

158. KAB, KUB. Akk., *kab*, "honor." Ar., *kulh*, "to wish," "covet." Heb., *khabab*, "to love," "be friendly." Tk., *keb*, "fancy."
159. NAD. Ar., *nad*, *nud*, "profit," "enjoy." Heb., *nîd*, "comfort."
160. SAL. Ar., *sal*, "save," "keep." Heb., *shalah*, "to be safe," "secure."
161. RA, RAS. Ar., *ra*, *ras*, "rest," "love." Heb., *râi*, Arab., *râi*, "a friend." Heb., *arash*, "to long for"; *aras*, "to espouse," Arab., *warash*, "to long for"; *ârûs*, "a bride."
162. LAG. Egt., *lukai*, "soft." Ar., *lag*, "lax"; *lagh*, "lie down." Heb., *leah*, "exhausted," "weary." Arab., *rah*, "rest."
163. LAS. Ar., *las*, "lust," and *laypos*. Heb., *lêkhen*, "to be greedy," "to lust" (cf. LIG, Class IV).
164. LUB. Akk., *lib*, "interior." Ar., *libh*, *lubh*, "love." Heb., *leb*. Arab., *lub*, "the heart." Tk., *lap*, "good." (Heb., *alaph*, Arab., *alf*, "to be familiar." Heb., *alûph*, "a friend.")
165. MAN. Akk., *munu*, "beneficent." Ar., *man*, "to think," "to heal." Heb., *mân*; Arabic, *mân*, "to think," "purpose."
166. BHID (cf. BAD, Class VII). Ar., *bhidh*, "to trust." Tk., *bôt*, "to trust"; the original meaning being "to bind," "make firm."
167. BAS (cf. PAS, Class V). Ar., *bus*, "to kiss." Arab., *bâs*, "a kiss"; probably connected with *boe*, "mouth." It is not an universal custom to kiss.
168. DIK, DA (cf. DI, Class II). Akk., *da*, "say"; *dik*, "word"; *dug*, "order"; *dil*, "speech"; *tuk*, "know." Egt., *teka*, "perceive"; *ta*, "head." Ar., *da*, "know"; *dak*, *dik*, *dig*, "shew," "teach," "deceive." Sk., *dhi*, "intellect." Heb., *dak*, "knowledge"; *dûr*, "observe," "look out"; *din*, "judgment." Tk., *til*, "speech"; *n*, "learn." Mong., *tane*, "know." Fn., *tan*, "learn."
169. MA, NA, NU, negative. Akk., *na*, *nu*, "not." Egt., *em*, *an*, "not." Ar., *nu*, "not." Heb., *ma*, *an*, "not," "lest"; *la*, "not." Tk., *neh*, "nor." Ch., *mo*, "not."
170. MA. Akk., *ma*, "this." Egt., *ma*, "of." Ar., *ma*, "this." Assy., *ma*, "this." Heb. and Arab., *m*, "that which." Tk., *m*, "my."
171. SA. Akkad., *sa*, "man." Egt., *saa*, "man"; *su*, "he." Ar., *sa*, "this"; *sama*, "same." Ass., *su*, "he"; *summa*, "like." (Heb., *ha*, "the"; *hu*, "he." Arab., *a*, "the"; *hu*, "he"; like Greek *ho*, "the": *h* for *s*.)
172. KA. Akk., *khu*, "man"; *ka*, "who." Egt., *akh*, "who." Ar., *ka* *ki*, "who." Heb., *ei*, "who"; *e*, "as." Tk., *ki*, "that which." (Fn., *ku*, *khu*, "man.")

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THE PRESIDENT (Sir G. G. STOKES, Bart.).—Our thanks are certainly due to the author of this elaborate paper, but I may say you have anticipated me by your applause. Perhaps Dr. Legge will kindly open the discussion.

PROFESSOR J. LEGGE, D.D. (Oxford).—I understand the President desires that I should say something on the admirable paper that we have just heard. I am hardly prepared to do so; not from want of attention to the subject, because it is one that for many years has been very much in my thoughts and at my heart; and although, unfortunately, as years have gone on, I have become less capable of catching the language that has been used or spoken, yet I have had the privilege, through the kindness of the Honorary Secretary, of being in possession of the printed paper, and I must say I have read it many times over and tried to comprehend it, tried to learn from it, and tried if it would help me to focus many of the ideas that at different times have flitted through my mind: yet when I have tried to come to definite conclusions concerning the points that the author has endeavoured with so much pains, and often with so much success, to bring before us, I have found it is very difficult to arrive at any definite conclusion.

We have much in the paper about a great many different languages with some of which I am, or have been at different times of my life, tolerably familiar, and one of which has been the great study—shall I say bugbear?—of my life for about sixty years. I mean the Chinese. What the author has said about the Chinese has interested me. Sometimes he has astonished me. It is not the first time that I have heard that Chinese is a very decayed language, and I have never been able to understand what is meant by thus characterising it. Does it mean that it is a very broken down language? Well, it has never admitted of much breaking down, because in all the thousands of years of its existence it has never been but a monosyllabic language, and it seems to me to be very difficult to break down monosyllables and to speak of them as falling into decay. The language, moreover, as it is written at the present day, is very much as it was written and in construction about 1900 years before the Christian era, and it really places me in a difficulty to understand what philologists mean when they speak of the decayed language that has been cultivated in China for so many thousand years and which has as many writers in it at the present day as many of our alphabetic

tongues, and an acquaintance with which has been and is the passport to distinction in the Empire, introducing to all positions of general culture and official rank.

Now with regard to the conclusions to which the author comes, I am happy to agree with him to a very great extent. There are the different families of languages to which Major Conder has referred: the Semitic languages, the Aryan languages, and the Mongolian languages; and that there is a close connection between the individual languages constituting those different families there is no doubt. Their affinities are many and they may be derived from one source, and one centre; the Semitic speech, the Aryan speech, and the Mongolian speech; but, when we advance further than that and say that all the varieties of human speech belong to these families, and that other divisions of the human race are from one source connected together by links which we hope by-and-by to understand, there I am unable to follow. There I am left as much in the mist, behind the shadow of the mystery, as ever I was; and the fact is that I have often resolved to have done with the study of languages: but then there has come in this thought, that all the treasures of human thought—all whereby man has endeavoured to enunciate what he is capable of—are only to be ascertained by a study of them. Suppose the Aryan languages of all kinds to be blotted out of the world, how poor it would be; so with the Semitic languages, and so, in a less degree, with the Mongolian languages; and shall I say so, also, of the Chinese language? But it so happened, when I was quite a young man, some sixty years ago and more, my attention was directed to the study of Chinese and, as I said, that has been my recourse and mental food, and very often my bugbear, all through life. So let men give their time and energy to the study of all those languages that have a literature, and are capable of instructing other races, and bringing out treasures that in time, in their own language, or in other languages, shall be unfolded to the study of other races; and I conceive that by-and-by, through these philological studies, we shall come to a better understanding of one another all over the world, and possess more of brotherly feeling, more of mutual consideration, more of mutual helpfulness and co-operation in what is good, than ever we have yet attained to, and we shall gradually, perhaps, find that ultimately we have one race of human beings in the world bound together by the com-

monest and closest ties of mutual consideration, deference, and love.

In one word let me thank Major Conder for all the information that he has brought together, and, by-and-by, if we meet again before a great many years, I hope we shall find ourselves nearer to a common view in regard to the curious points to which he has directed our attention this evening. (Applause.)

MR. THEO. G. PINCHES.—I must say that, after listening to what Dr. Legge has said, I feel very diffident in speaking; for I have not had his wide reading, being, in fact, very much of a specialist, and bound down to that speciality by routine work. I have listened with a great deal of pleasure to Major Conder's very instructive paper. I was unable to read it right through before I came here, and, consequently, I have not so perfect a knowledge of its contents as I should desire. On reading such a paper as this a great many isolated points naturally occur to one, and among them there are such questions as this: why is it that the Akkadians, when speaking of the precious metals, generally say "gold and silver," whilst the Assyrians and Babylonians, amongst whom they lived, always say "silver and gold?" Then there is a very interesting point in connection with another word—the name of a well-known animal, the horse—why do the Akkadians write the name of that animal with three characters rather than with one? They call him, apparently, "the animal of the country"—(the words have been translated "the animal of the East," but that I do not believe to be the correct rendering). Then, again, among other questions, there is that of the Akkadian name for God. This, in that language, is a word of two syllables, namely, *Dingir*, of which the Sumerian form is *Dimmer*. Some time ago I formed the opinion that the first syllable, *din* or *dim*, was none other than the word for *spirit*, and *gir* or *mer*, means, in Akkadian, *strong*. Therefore it would seem as if the Akkadians regarded the greater Gods as "the strong spirits." In this connection I may mention that the greater part of the polytheism of the Assyrians and Babylonians seems to have been of Akkadian origin, and that is a question that I hope to have the pleasure of touching upon before this Institute. It is one of considerable importance and worthy of a certain amount of research. Of course, in a great many other isolated points in this paper, I have seen things with which I could hardly agree, and which seem to me to want improvement. But

still, on the whole, it is exceedingly good, and it falls in, in fact, with what was stated at the late congress of Orientalists, by Professor Hommel, the Rev. C. J. Ball, and others (who spoke on that occasion in the Semitic or Babylonian sections), viz.: the connection that must have existed between ancient China, Egypt and Babylonia. I think we may regard this connection as exceedingly probable, and further researches will, no doubt, give us more light upon the subject. I hope that Major Conder will continue his interesting researches and will give us some further information from his wide experience at some future time.

REV. KENNETH S. MACDONALD, D.D.—I cannot speak with authority upon this subject; but there is one little point I should like to receive light upon, or throw a little light upon, if I can. It is with regard to the question of vowel harmony (treated on in the section on Mongolic languages). Major Conder, in his most admirable paper, is not able to throw any light on the subject as far as the Aryan languages are concerned. Now Max Müller tells us in his Gifford Lectures of 1890, that there is a law in accordance with which the vowels of every word must be changed and modulated so as to harmonize with the keynote struck by its chief vowel; he finds this law pervading the Tungusic, Mongolic, Turkic, Samoyedic, and Finnic classes of languages, and even in dialects where it is disappearing it has often left traces of its former existence behind—nay, more, “the same law has been traced in the Tamulic languages also, particularly in Telugu, and in these languages it is not only the radical vowel that determines the vowels of the suffixes, but the vowel of a suffix also may react on the radical vowel.” But he adds: “No Aryan or Semitic language has preserved a similar freedom in the harmonic arrangements of its vowels, while traces of it have been found among the most distant of the Turanian family.” Such is Professor Max Müller’s opinion.

Now all scholars are agreed that Gaelic, the Celtic language of the Highlands of Scotland, and Irish, the language of our fellow subjects in the Emerald Isle, are Aryan, indeed the oldest branches of the family. Here are extracts from two or three of the Gaelic grammars accessible to me:—

1. Forbes, at p. 9 of his grammar, gives two rules on the spelling of Gaelic words, a knowledge of which, he says, makes Gaelic orthography extremely easy:—“1. When the last vowel in

the preceding syllable of a word is a broad, the first vowel in the following syllable of the same word must be a broad." "2. When the last vowel in the preceding syllable is a small, the first in the following syllable of the same word must be a small also."

2. Stewart, in his Gaelic grammar, p. 30, speaks to the same effect, but briefer:—"The rule has long obtained in Gaelic orthography, that in polysyllables the last vowel of one syllable and the first vowel of the subsequent syllable must both be of the same quality." In Gaelic "*Leathan ri leathan is coal ri coal.*" To the same effect are the words of

3. Armstrong. "Though to the ordinary English reader they be unintelligible, such and such words are more commonly written so and so to 'preserve the rule *coal ri coal is leathan ri leathan,*'" which means simply "broad to broad and small to small." It will be observed that Gaelic grammarians do not say which vowel acts, and which is acted on, but the rule is emphatic—there must be a "vowel harmony" in every case. So this is another link in common between the Aryan and non-Aryan languages tending to prove that they have "descended from a single original stock."

REV. S. W. KOELLE, Ph.D.—Perhaps in connection with the last speaker's remarks I may mention that what the learned author has called "the harmony of vowels" is properly a harmony of sounds generally. In the Tartar languages, of which Turkish is the chief representative, this law of harmony or euphony exists; but it is not restricted to vowels, for it extends equally to consonants. I will give you an instance. The roots of the language are either hard or soft roots; *e.g.*, *bul* is hard, *bil* is soft. The former as Imperative means: find! the latter: know! Now their respective Infinitives are: *bul-mag* (to find), *bil-mek* (to know); their future Participles: *bul-adjay* (going to find), *bil-edjek* (going to know), &c. So you see the law of harmony in Turkish regulates both the vocal and consonantal character of all the formative additions. According as the root is either hard or soft all the affixes must likewise be either hard or soft. You therefore have here a symphony of sounds affecting not only the vowels but the consonants as well.

THE AUTHOR.—I thank you for the reception given to my paper, and shall not detain you more than five minutes. I consider myself very fortunate to have been treated so kindly by those

who have spoken on my paper and who are all known to have more experience in philological subjects than I possess, and especially I feel honoured by the presence of Professor Legge, who is so well known to us as one of the most distinguished Chinese scholars in England, and whose Chinese translations I have had occasion to read. There are two points in his remarks that I should like to mention: one is in regard to the decayed, broken down condition of Chinese. I intended to refer to the vocabulary, not the idiom, or construction of the language, which is most distinctive. But I think, comparing the oldest known Chinese dialect (Cantonese) with the Mandarin dialect, any scholar would allow that a considerable abrasion has gone on in the vocabulary of the Chinese.

The other point is the question of the single origin of language. That is exactly the question I wished to raise; but I do not consider myself capable of settling it—I only wished to raise a discussion on the subject. It appears to me that as the Asiatic peoples are supposed by all scholars to have lived, originally, within a comparatively short distance of each other—not more than 500 or 1,000 miles apart, there is nothing *prima facie* improbable in the theory of their having been, originally, a single stock and their languages having an extremely remote common origin.

With regard to Mr. Pinches, he always treats me with kindness, and I have confidence in him as an Akkadian scholar, for I regard him as the safest we have in England. There are one or two remarks that he made as to Chinese in regard to the works of Mr. Ball, to which he referred, and which I have read with great interest. His conclusions would go in favour of my conclusions. As to the word *kurrd* for *horse*, in the Mongolian language, it simply means a galloping animal. As to the word *dingir* I am of Mr. Pinches' opinion, that it means *spirit* and comes from a root which means to live or breathe or be alive.

Mr. Macdonald's remarks were of great interest to me because I know nothing of Gaelic, though I am aware that the Celtic Latin group is, perhaps, the oldest of all Aryan groups of language, and the discovery of vowel harmony in that group goes still further towards the observation of the general law which to a great extent has died out in many languages and survived in others.

Dr. Koelle's remarks on the harmony of consonants are of great value. I have noticed in the Turkish that what he has said to-

night is observable, and I have to a certain extent mentioned it in the paper at page 210 in regard to the Aryan languages in which vowel harmony exists to a certain extent, and it is also supplemented by the consonantal harmony which is found to exist in the Tartar and Zend languages.

The meeting was then adjourned.

#### REMARKS ON THE FOREGOING PAPER.

The Rev. R. COLLINS,\* M.A., writes:—

After the long study and care bestowed by Major Conder on the subject of this most interesting paper, it seems almost an impertinence on the part of one who has comparatively little time for such study to say a word. Nor am I able to refer to all the vocabularies that have been used by Major Conder. I would, however, venture to suggest a doubt whether all language can be traced ultimately to simple monosyllables. Is there not evidence of some further law of sympathy between sounds (especially consonants and combination of consonants), and the impressions produced by actions, or feelings, which carries us along beyond merely so simple a syllabic origin as here suggested? However correct the illustrations at the close of this paper be, are there not many cases left thus incapable of explanation?

Take a class of words in which k, s, p (with sometimes r) are the backbone. For instance, there is the remarkable word used for the first description of the “manna” (Ex. xvi. 14). Leaving the vowels out of the question, it is *khasaph*, or *khasap*, the root meaning being to “peel,” or “scale”; so that it seems to mean a “scrap,” or, as our Revisers put it in the margin, a “flake.” Another form of the same word seems to be *sakhaph*, to “scrape,” or “sweep.” Gesenius, no doubt correctly, compares it with the Gr. *skaptein*, to “hoe,” or “dig,” whence we get *skapnos* (scraped out, or dug out), *skiff*, *ship*; *khasap* and *sakap* both occur in Arabic, also conveying the same idea, as in the Hebrew, of “scraping.” I do not recall a parallel in Sanscrit, or the South Indian languages. But in our own German and Latin, we have *scab*, *schaben*, *scabere*, and (perhaps) *shave*; probably *scoop* belongs to the same family. With a later addition of r (a point Major Conder notes) we get *scrape*, *scrap*, *scramble*, *scrabble*, *scrub*; and as s is apt to be lost before k (as between Sanscrit and Pāli) we may

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\* Late principal of Cottayam College.

get *grub*. We have here similar combinations of the same, or allied, consonants, and the same idea implied. But we do not seem able to trace the words back to any simple monosyllable. On the contrary the apparently oldest form is found to be dissyllabic. Of course the Hebrew form is far from the original; already the word exists in two forms in that language, and in Arabic, the position of the letters being transposed. It strikes one that, could we get no further back than *ship* and *shave*, we should be entirely in the dark about their antecedents. May not, then, some of the apparently simple roots have some very different origin from what is supposed? even in some cases less simple than they themselves seem to be? Imitative sounds no doubt count for a good deal; but is there not a further sympathy between *sound* and *feeling*, that is probably capable of at least some amount of investigation?

The study of the growth of language is extremely fascinating, and Major Conder's paper is a most valuable contribution. But perhaps, after all, the evidences as to the unity of the human race is the most interesting and important point brought out by these studies of language.

#### THE AUTHOR'S REPLY.

The three roots to which Mr. Collins refers are, I believe, secondary and tertiary roots. The prefixed S in both Semitic and Aryan speech (a degradation of the root AS "to be") has the force of a causative verb. In Assyrian and Sabeian it forms the *Shaphel* voice of the verb which is causative. The earlier roots I, therefore, suppose to have been *Kap* and *Karp*. The first root which occurs in all languages has the meaning to "be hollow," hence "Ship" and "Scoop" would mean "hollowed out." The root *Karp* in Aryan and in Semitic speech means to "cut off," and in the former class is regarded as a secondary root from *Kar* which means to "cut" in all three classes of Asiatic speech. These roots may, therefore, I think, be easily reduced to monosyllables. The Hebrew root *Sakhap* would come from *Kap*, but *Khasap* is a distinct secondary root, from *Khas* which, in all three classes, means to "split." The *p* is a common termination in in Mongolic and Aryan speech, for words derived from monosyllabic roots, and none of the words quoted seem to me to run counter to my system.

As regards the unity of the human race, those who follow Darwin's theory of variation should find no difficulty in accepting it. Darwin has shown how species tend, under altered conditions, to become black and white in colour. White men are found near the poles, and black men near the equator, so that the influence of the sun on colour may be suspected. The difference between the long head of Aryans, Semitic peoples, and negroes, and the short head of Mongolic peoples, may also have developed within historic times; for, as Dr. Beddoe has noticed, the prehistoric heads, in countries where short heads now prevail, have been found to be longer than at present. The Akkadians, both in feature and in vocabulary, present resemblance to both Aryan and Turanian peoples: the oldest Aryan languages (Lett and Teutonic) belong to peoples with medium heads; and such evidence as we possess seems to indicate an original type brown in colour, and medial in measurement of the head, whence the various races have diverged. The ancient Egyptians give the medium character.

### INTERMEDIATE MEETING.\*

D. HOWARD, ESQ., D.L., IN THE CHAIR.

The Minutes of the last Meeting were read and confirmed, and the following Elections were announced:—

MEMBER :—Francis G. Smart, Esq., M.A., M.B., F.L.S., F.R.G.S., F.S.A., Kent.

LIFE ASSOCIATE :—Major A. W. Bell, Ind. S.C., India.

ASSOCIATES :—Robert P. Greg, Esq., F.S.A., F.G.S., Herts; S. McCracken, Esq., A.B., Ireland; Rev. J. E. Kittredge, D.D., United States; Hugh Shrewsbury, Esq., M.A., New Zealand.

A LECTURE entitled "Notes of a Visit to Tel-el-Amarna," was given by Mr. W. St. C. Boscawen, M.R.H.S. A discussion of a general character ensued.

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\* 11th of 28th Session.

## INTERMEDIATE MEETING.\*

D. HOWARD, ESQ., F.C.S., &C., IN THE CHAIR.

The Minutes of the last Meeting were read and confirmed, and

A LECTURE on the "Endurance of Cosmic Conditions" was delivered by Professor J. Logan Lobley, F.G.S. A discussion of a general character ensued.

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\* 2nd of 29th Session.

## INTERMEDIATE MEETING.\*

PROFESSOR E. HULL, LL.D., F.R.S., IN THE CHAIR.

The Minutes of the last Meeting were read and confirmed, and the following Election took place:—

LIFE ASSOCIATE:—Rev. G. Whitehead, Burma.

A LECTURE on "Extinct Animals in Relation to Living Types" was delivered by the Rev. H. N. Hutchinson, M.A., F.G.S. A discussion of a general character ensued.

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\* 4th of 29th Session.

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